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THE PHILOSOPHY OF ARBORICULTURE AND LANDSCAPE GARDENING.

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HIGH is the calling of the cultivator. It is not to provide food merely, though of all things food is, of course, the most important; but it is in concurrence with the architect and the engineer to extend the power of man over nature in a friendly way; it is to clothe mere material nature; in the beautiful lineaments of humanity Nature, indeed, even when left entirely to herself, is always respectable and never ugly—never mean. But how much more beautiful when she bespeaks man's intelligence and tasteful dealings with her; when the panorama on which the contemplative eye is invited to rest, displays not only rocky mountains, or wooded valleys, or open plains, but noble mansions

"Bosom'd high in tufted trees;"

adventurous bridges spanning ravines and rivers, smiling cottages, corn fields, and flower-gardens, parks and meadows, with frequent trees, standing like sentinels to guard the forest on the upland!

Next to the discharge of social duty, next to the endeavour to be a Little Providence in his own sphere, consulting for the happiness and well-being of all around him, the best way in which a man can spend his life, is to devote it to Nature, with a view to draw her out for man's behoofs, either by reminding her of seed-time and harvest, or by rendering her Beautiful for continual enjoyment. And in this there is great encouragement. Those powers in nature which refuse to be trained, and which resist all charge, are not more powerful now than they were thousands of years ago. The storms of the ocean are not more terrible. The rock of the alp is not harder. The climate of the district (if the surface of the ground beneath has not been changed) is not more cold, or damp, or arid. But meantime man's power over nature has been marvellously increased. Nature can no longer resist him so effectually now as she could do in former times Let the winds blow and raise the sea into what waves they may, the steamship can cut the waves through as they successively attack her, can hold right on her course in spite of them, and make head-way right in the wind's eye. As to the rocks of the Alps, be they ever so hard, it has been voted that they shall be put out of the way along a certain line, to the end that the traveller to whom time is an object may no longer have to go over Mont Cenis, but right across the base of the mountain. And in a few years a tunnel many miles long will be open right through from France to Italy. Nor is it the engineer alone who is thus coming into the possession of such dominion over nature. The forester also is acquiring such power even over climate—that element on which man's well-being depends more than on any other—what we expect our children will see vast tracts of country, which through the destruction of their forests have long since become arid and inhospitable, or lapsed into the state of mere bogs, restored to cultivation and amenity again, as also other tracts which are now too cold and rainy, rendered genial. Great, in fact, is the power and majesty of the forest tree. It is the finest symbol which the world supplies of the undying state—immortal life. No true man can have any other feeling but that of a sacred respect for a forest tree. Among our ancestors, indeed, or at least the inhabitants of this country, at that time when its history begins, this feeling was carried too far. They worshipped the forest tree. Or if with regard to them this may be a question—it is no question with regard to our fellow-subjects in India. There, some religious sects worship certain forest trees at the present day. And it seems to me not improbable that this worship may have been instituted by the priesthood both as an expression of the veneration which they themselves felt for the forest tree, and also with a view to impress upon the mass of the people an idea of the value of trees and forests. For the institutes of civilised heathen

ism, though, when they are viewed in the light of the true religion, they are very much to be deplored, are often possessed of much social and political value.

It is at all even's certain that the way in which the inhabitants of the finest countries on the surface of our globe tend to bring upon themselves the gratest calamities, is by the thoughtless destruction of the forest, first around their dwellings, then all over the country. For a few generations at first, indeed, the felling of the forest is a triumph over nature, for ground that bears grain or annual crops of some kind, is always more convenient than ground that bears trees, however nutritious or delicious their fruit. But when the custom of wood-cutting has once been established in a community, and the necessity of more and more firewood and more and more material for building, as also of new clearings for the sake of obtaining a virgin soil increases with the increase of the population, the process of felling tends to go on too far—even till the whole accessible country is denuded of its forest, and the soil is laid permanently bare to the impact of the sunbeams. Now of this the consequences are most injurious. In the first place the rainfall is proportionally diminished. And though, as we know in Scotland, there are some countries where this would be an improvement, yet in reference to all intertropical countries, and indeed the surface of our planet generally, it is an evil. And in the second place, the soil, when stript of the clothing which the forest afforded, and exposed naked to the heat of the sunbeam, changes very rapidly from the rich mould which the long-continued fall of the leaf in the forest had made it, and becomes very unproductive. Had occasional trees in the forest been left to give shade during part of the day, the destination of the carbon in the mould would have been to be slowly converted into carbonic acid, and so to supply food to the successive crops growing on the soil as they required it. But when the sunbeam is left free to break in its full force on the soil all day long, it burns the carbon in the soil with great rapidity into carbonic acid. And this gas, unless there be in the soil some oxide having affinity for it to retain it, goes off as gas, injuring the salubrity of the air perhaps, and at all events wholly impoverishing the soil; for carbonic acid is the principal food of all plants. The same course of things, it might be shown, happens with regard to ammonia; and thus, both as itself the immediate food of plants, and as that which by oxidation yields nitre, ammonia is lost. Thus the indiscriminate destruction of forest over any great breadth of country, if that country have plenty of sunshine, is a great evil.

This is not mere theory. There is, on the contrary, good reason for believing that the view now given explains, to a great extent, the character of the surface and climate of all the old inhabited regions of our planet in the present epoch of the world. And what invests the subject with interest is this, that while it explains the cause of certain great evils which prevail very widely, it also suggests a cure for them. Thus, not only is the great breadth of Africa and Australia, in consequence of aridity, unfit for being the dwelling-place of civilized man, but Western Asia, and even the valleys of the Ganges, the Jumna, and the Indus, are greatly at fault in this respect. Now, of the former regions in former times we can say nothing for certain, because nothing of their early history is known. But with regard to those Asiatic regions which have been named, their ancient history is known. There can be no doubt that, in ancient times, they were more densely peopled, and that by races far more energetic than their present inhabitants. There can be no doubt that their climates were more genial and their soils more fertile then than they are now. And why the difference? It is due, I believe, to the thougtless destruction of the forest, with which nature ever tends to clothe the entire surface of our planet, so far as it is possible for her to do so. Hence in the present age a great decrease in the annual rainfall, and its confinement to certain seasons depending on celestial, not terrestrial, influences, instead of a more uniform distribution over all the year. Hence a compararatively rapid combustion of the soil by the sunbeam, and the loss of the fertility imparted to it by the virgin forest now no more.

But why, it may be asked, press this theory? It is only a speculation, And granting that it is true, what can be made of it? To this the answer is, that it proclaims aloud to the philanthropic traveller, colonist, planter, soldier, and to any government in charge of such bare and desolated territories as have been described, to do all they can to encourage arboriculture to the utmost in their power, and to call for the restoration of the forest.

In reference to many at present inhospitable lands, there is no saying what benignant results might be effected in the course of even a few generations, if only trees could be stolen upon them, and ultimately established in such clumps, belts and breadths as might be required. With regard to Western Asia and Africa, indeed, the case, in consequence of the characters of the governments which rule there, may be hopeless in the present generation. But something might, perhaps, be begun to be done even now for the valleys of the Ganges and Jumna and their tributaries, and for those of the rivers of the Punjaub, and for Australia, which are all more or less under our own control.

But can nothing be done nearer home? Is our own much-loved country all right as to arboriculture? In answer to this it may be said, that it is at least very pleasing to consider what has been done. When the Emperor of the French was contemplating to do something for Mexico, he appointed one of the most learned men of sience in France to give him in a report as to different nations, showing what nature had done for each of them, and what man had done. The result was, if I remember rightly, that of thirty which were compared, Scotland stood second as to what man had done for her, but lowest and last as to what nature had done for her; while as to Mexico, its position was as nearly the very reverse. Admirable, therefore, is that which man has done for Scotland already.

But from what has been advanced, with regard to other contries, the question may be legitimately asked here, Has our country, too, been denuded of its primeval forest by the unreflecting hand of man? Now, to this the answer is, that in our latitudes the hand of man is not required for that work. Where the temperature in the shade never rises high, the vegetable remains resulting from the fall of the leaf, instead of decomposing too rapidly, as they tend to do in tropical countries, scarcely decompose at all. On the contrary, the mould tends to give birth to certain chemical substances, such as tannin, and especially gallic acid, humic acid, &c., which are not only themselves not decomposable in ordinary course, but which preserve from decomposition the mould-molecules with which they are mixed. Hence the stratum immediately under the trees continually increases in thickness from age to age. Now, like other insoluble media, this sour soil is no food for the trees growing upon it. They spread out and send up to the surface the spongioles of their roots in vain. If they receive anything, it is only poison instead of food. And thus it comes to pass that ultimately the forest fails of its own accord; and its only recorders are the noble shafts of trees found prostrate in the moss when that moss happens to be cut into.

The state of the elements which produces this result extends over Europe for a breadth of about three degrees of latitude. In some regions, however, it is not so inimical to nature's determination towards arboriculture, but that where one forest has fallen she succeeds in rearing another spontaneously of a different kind on the same area. Thus archæologists, in their recent researches into the antiquity of man, have brought to light by their diggings that Denmark, in successive epochs, has been clothed by three successive forests,—first of pine, then of oak, and now of beech. But to accomplish such an

end in our country seems to require the aid of instructed reflective man,—first in draining and so far reclaiming the bog. and then in planting it anew with suitable timber.

(To be continued.)

CAMPHOR LEAF OIL.

BY DAVID HOOPER, F.C.S.

The recent high price of camphor, on account of the war between China and Japan and trade monopolies, has caused some anxiety in countries where it is largely consumed, and China and Japan being at present the only two countries where camphor is produced on a large scale, it has been thought desirable that its cultivation should be taken up in other lands. In Japan the camphor trees grow at high elevations away from the sea, and only large trees of about one hundred years old are selected for use in making the camphor. From the export returns of this country, it seems that the supply is gradually becoming exhausted. In the island of Formosa the camphor trees are said to be by no means plentiful, and they grow only in certain favourable situations as far as the climate is concerned, with savage tribes in the immediate vicinity. Here the trees are not considered worth taking until they are fifty years old, and the wood only of the roots and stems is subjected to distillation.

The camphor tree grows very well in India. The Calcutta Botanic Gardens possess a fine avenue of trees which were introduced in 1802. It grows well in the Ootacamund Botanical Gardens and in other parts of the Nilgiris. It has been planted, as an experimental measure, at Jhansi in the North-Western Provinces, and in other districts in the plains. Camphor has been known and used in India for many centuries. In A.D. 642, Indian princes sent camphor as a tribute or offering to the Chinese emperors. At one time the tree flourished in Nepal and Tipperah, a large tract of land lying between Bengal and the Upper Irrawaddy. Within the present century camphor was imported from Chittagong, but it has been said that the discovery of the hill-men of distilling it from the root led to extinction of the trees.

In Ceylon the camphor tree grows well at elevations of 5,000 feet and less; it has the habit of a willow in the island, and it has been suggested that, like a willow, the trees should be coppiced, and the leaves and branches used for preparing the oil. The tree grows for ornamental purposes in Naples and other parts of Italy. Professor Maisch in 1891 reported on the cultivation of camphor in Florida, where it flourished in almost any soil. The solid oil was made from the leaves and branches; the yield was 4 per cent, and the product was more like that of Japan, as it had an odour of safrol. California has lately become the scene of an industry which has for its objects the planting of the laurel camphor and the preparation of the oil for the American market. The tree has also become naturalised in Java, Brazil, Jamaica, and other isles of the West Indies, Mauritius and Madeira.

It is very evident that the camphor tree is able to grow very luxuriantly and extensively in the warmer temperate and tropical parts of the world, far removed from China and Japan, but the slow growth of the tree would prevent all but large capitalists from opening up plantations and waiting for the plants to sufficiently mature. If it is true that in the island of Formosa the wood only of the larger trees is used, and the leaves and branches rejected, then there can hardly be a scarcity of the trees, or the manufacture must be conducted in a very reckless and extravagant manner. The camphor from the Dryobalanops tree is said to be quite liquid if a young tree is tapped, and solid if the tree is old. Under such circumstances it would seem that the liquid oil constituted the first stage in the development of the solid substance. It is stated in some text-books on materia medica that the stearopten exists in every part of the plant, including the leaves. On the other hand, it is remarkable that the leaves are not used in China and Japan; perhaps the natives have found that the leaves only give a liquid product which cannot be profitably turned into camphor. As there is no definite information on this point to be found in any description of the industry, I thought it would be interesting to try the effect of distilling the leaves. Another reason that encouraged me to make some experiments in this direction was the hearty manner in which some energetic planters of Ceylon have taken up the camphor question.

A large number of experiments have been made, and a great deal has been written, with regard to camphor oil, the bye-product obtained in refining crude camphor before it is formed into blocks. This, has been proved to be a very variable liquid with a specific gravity ranging from 0·88 to 1·00, an erratic optical rotation, although usually to the right, and containing camphor in suspension, or in solution, or none at all.

The first sample of leaves came from an unbrageous tree growing in the Government Gardens at Ootacamund. Fifty pounds of the leaves in a fresh state were distilled in a large copper still with sufficient water for six hours. Eight fluid ounces of oil were separated from the distillate, giving the yield of essential oil one per cent. The oil had a slightly yellow colour, a specific gravity at 15° C. of 0·9322, and a rotation of +9°·4 in a 2 decimetre tube. It gave off a small quantity of liquid at 160°, and began to boil regularly at 175°.

Collected below	180°	=	20·6
	185°	=	31·0
	190°	=	15·5
	195°	=	10·6
	200°	=	5·6
	205°	=	3·3
	Residue	=	8·6
			95·2

The loss here was occasioned by some of the camphor congealing in the condenser; the amount, however, in this sample could only be about 10 or 15 per cent. The residue in the retort was quite solid in the cold, and had a yellowish colour and strong camphoraceous odour.

The second sample was obtained from some younger trees grown at Naduvatam on the Nilgiris, a district more than a thousand feet lower than Ootacamund. The leaves were distilled in the same manner as in the previous experiment, but a large quantity of camphor condensed during the process and almost choked up the worm of the still. About four ounces of liquid were collected, having a mass of crystalline matter suspended in it. The oil was strained through cloth, and the solid matter, pressed hard to remove all the liquid portion, was left as a cake of camphor, weighing two ounces. The clear oil had a specific gravity of 0·9314 at 15° C., and twisted a ray of polarised light +54° in a 2 decimetre tube. It began to boil regularly at 165°.

Collected below	185°	=	13·3
	190°	=	20·0
	195°	=	15·5
	200°	=	20·0
	Residue	=	25·0
			93·8

The loss was again accounted for by some of the camphor condensing in the cool tube. About one-half of this oil consisted of solid camphor, or, calculating the camphor already separated, the oil from the Naduvatam leaves contained 75 per cent., which is a very satisfactory result. The camphor dissolved in rectified spirit, twisted a ray of light + 30°. The altitude of the Government Gardens in Ootacamund is 7,300 feet, and it is possible that this elevation influences the formation of the solid stearopten in the leaves. At any rate, it is interesting to know that a large proportion of camphor can be obtained from the oil of the leaves and from the leaves themselves, and probably, if taken from trees grown at a much lower elevation, a much larger proportion of this useful substance could be collected. —*Pharmaceutical Journal.*

VARIETIES OF WOOD MORE, LESS, OR NOT SUITABLE FOR TEA CHESTS.

(*Translated for the "Tropical Agriculturist" from "Teysmannia."*)

Tea cultivation in Java, as has been the case with other cultivations, has entered upon its years of strict economy. In the good old times this was not so. Then it was profit. But necessity teaches one to pray; and the regally fortunate planters in that golden time would certainly have laughed, if they had been told, that a pound of tea *can* be made and delivered for the price that it now costs the planter.

Amazingly instructive is such a compulsory economy. If only the old prices came back again now! This sigh is generally uttered when once again a lot of tea is sold on less favorable terms. But they have not yet come back; and probably never will.

It is fortunate that tea cultivation in Java, in this "struggle for existence," still holds its own.* In such a general economizing attention must be given to every detail. One of these details is the article of *tea chests*.

As a rule the planter makes his chests himself. Only a few are in a position to buy chests cheaply. The transport and the profit which the contractor must naturally have make it too expensive. A sawing machine is found upon almost every estate. Some of the larger ones have frame-saws; but a single circular saw, driven by a water-wheel, can abundantly supply the need, and, without much trouble, yield planks for 8,000 to 10,000 chests, representing a production of 640,000 to 800,000 half-kilos of tea.

Sawing is best done with the hand; blocks of wood, still round and with the bark on them, cut up or sawn off to the length of the desired planks, are guided by the hand toward the saw, which turns at a speed of 600 to 1000 revolutions per minute. This method of dealing would not succeed if hard kinds of wood had to be operated upon. Tea-chest wood must be light, and at least so firm of fibre that a wire-nail will hold firmly in it. Further, it must dry easily, and not get mouldy too quickly or shrink too much.

Formerly the wild timber of the Government forests was mostly utilized. Innumerable varieties of all kinds of woods are to be found in these forests. But, partly because the distances, and therefore also the cost of transport, are too great, or because the tariff for these kinds of timber, even the lowest, of 1-5th of *djati* wood, is still too high, the planter had to seek other sources, which were found in *kampong* timber or their own planting. The *kampong*, with their surrounding little gardens, *hoemas*, ravines, &c., yield a number of varieties of wood, suitable for the purpose. Many fruit-trees, which in the lower districts yield sweet, juicy fruits, grow well in the mountains, but yield fruits edible only by natives or quadrumanous inhabitants of the forest, *tant soit peu*. Experience teaches, that the value of the timber of *nangka*, *doeren*, rambutan, mango, *djeroek-besar*, jambu, &c., growing at 3000 feet, is greater than that of the fruit. For the tea planter, moreover, there is generally the full opportunity of making himself independent with his own timber by planting along roads and paths or in ravines, or if need be by systematic forest cultivation.

What variety of wood is *the* best for tea chests is still an open question. So long as that is not decided and an abundance thereof planted, the planter will still have to content himself with a number of varieties of wood, which are more or less suitable, and he will often have experience of varieties of wood which are *not* suitable for tea chests.

At a medium elevation of 3000 feet, in the heart of the Preanger, the tea-planter-chest-maker has to do with the varieties of wood mentioned in the following list. This cannot make the least claim to completeness. Many varieties of trees, however, exist in large numbers in some places, in others sporadically or not at all. Of the varieties of trees from the primeval forest only a portion of the best known and most important, or that exists plentifully in the forest ravines outside the primeval forest, have been examined. A * denotes the varieties that are suitable for tea chests, and ** those that are specially noteworthy, to be bought up or planted.

For the correctness of the Sundanese names, the writer can answer only so far as they are in use in his immediate neighbourhood, viz., the Malabar mountains to the south of Bandoeng. For the rest, most of the Sundanese names are pretty general over a large portion of the Preanger, if one does not attach too much credit to the unsubstantiated information which one sometimes gets. Not all natives are good arborists. The Latin generic names are taken from "Filet" and from the botanical dictionary of the trees of Java by S. H. Koorders. In that province, even in the generic names, great confusion still prevails. Each writer favours quite distinct names. I have ventured to retain several well-known names from "Filet," although in the work of Mr. Koorders quite different ones are found. For some it was not possible to give a Latin name except by means of a lucky guess. The spelling of the Sundanese names differs in many points from that followed by Mr. Koorders. The simple and rational method of spelling of Geerdink-Coolsma in my opinion deserves the preference.*

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1 *Albasia.*** *Albizzia moluccana.* A tree of great virtues and great faults. No variety of tree yields, in a short time, so great a quantity of wood, of very useful quality. The wood is somewhat too soft, and must therefore be sawn somewhat thicker and be fastened with longer nails. It is however very uniform, dries quickly, does not shrink much, and is pleasantly smooth to plane. The tree grows everywhere luxuriantly and incredibly quickly, but one loses much wood (1st) by the wind, which often breaks off the largest branches or causes the tree to split down to the roots; (2nd) by a green *boktor*, striped with yellow-brown on the wing-cases, which attacks the tree and causes it to die off on a large scale. The bark then falls off in pieces, and the wood is riddled like a sponge by the larvæ of this chafer. As soon as one sees dying at the foot a fine wood dust, that makes its appearance through small holes in the bark, and gives the first intimation that the tree is doomed, it must be speedily cut down.

2. *Angrit.* *Quercus* spec. (See No. 33 *Kajang.*)

3. *Baros.** *Manglietia* spec. This tree has its home in the primeval forests. The wood is handsome in appearance, greenish, yellow-brown, but somewhat brittle. Also very suitable for building. The old trees are mostly called *Manglid.*

4. *Beleketebe.** *Echinocarpus* spec. Wood very good for chests. Comparatively rare. Is very heavy.

5. *Beunjing.* *Ficus.* (See No. 42 *Kiara.*)

6. *Bintinoe.** *Melochia* spec. (Koorders). Good and useful, but even from older stems somewhat too hard; but seldom of sufficient proportions.

7. *Biroe.** *Canariopsis* spec. (Filet). A handsome, good wood; seldom met with.

8. *Bisoro.* *Ficus* spec. (See No. 42 *Kiara.*)

9. *Boengoer.* *Lagerstroemia* spec. This tree, which is every year covered with rose or violet flowers, yields an extremely hard wood, valued in the Government tariff equally with *djati.*

10. *Boctaroera.* *Quercus* spec. (See No 33 *Kajang.*)

11. *Mangifera* spec. div. The wood of the varieties of mango is too hard and too heavy for tea chests. With the exception of *Lmoes*, and the wild-growing *Pari*, all varieties of the mango are called in the Preanger *Boewah*, not only the fruit, but also the tree.

12. *Dadap.* *Erythrina* spec. div. All the varieties of dadap, as also the thorny *Dadap tjoetjoek* and the *Tjangking*, must be condemned. The wood is too spongy.

13. *Damar.** *Dammara* spec. (Filet). Is specially planted for tea chests, in lower lying districts. At

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* The words from "struggle" to "own" are given in English in the original.—*Tr.*

* In the Dutch system of spelling Malayan words *oe* = English *oo*, *eu* = Eng. *u* in *burn*, *j* = Eng. *y*, *dj* = Eng. *j*, *tj* = Eng. *ch.*—*Tr.*

3000 feet the tree does not always grow well, and it is liable to diseases. The wood must be of very good qnality.

14. *Djadjawaj.* *Ficus* spec. (See No. 42 *Kiara.*)

15. *Djamboe.* [*Jambu.*] *Jambosa* spec. div. The wood of all kinds of jambu is hard and heavy. In the mountain regions the fruits are all incdible.

16. *Djamoedjoe.* *Podocarpus* spec. When planted outside of the primeval forest this tree grows badly. Its home is in the higher lying belt (4000-5000 feet), where it forms one of the forest giants. The wood is a good timber.

17. *Djati.* *Tectona* spec. Of well-known utility.

18. *Djengkol.** *Pithecolobium* spec. The quality of *Djengkol* wood leaves not much to be desired for tea chests, but it has an unpleasant odour, which, however, cannot penetrate through the tea lead. The tree grows quickly, and is to be met with in abundance. The fruits are unwholesome. He who eats much of them becomes *djengkoleum*, a peculiar disease.

19. *Djĕroek.* *Citrus* spec. div. Only the *Djĕroek gĕde* or pumelo attains to sufficient dimensions to enable it to be sawn into planks. The wood is however far too hard. The fruits consist (at 3000 feet) of ⅞ husk and ⅛ a sour, bitter, fibrous kernel.

20. *Djeungdjing.*** *Albizzia stipulata.* (Filet). Although this wood, which is obtainable in large quantities, is stronger and denser than that of *A. moluccana*, and is one of the most largely used for tea chests, yet serious defects attach to it. The tree is not so easy to plant, and grows much less quickly than its transmarine brother. On the other hand it is better able to stand the wind, and not so subject to damage from insects. The heart-wood and the sap-wood are very differently colored, which gives a mottled appearance to the chests. The sap-wood rots very easily, and then becomes permeated by a dark-colored mycelium. If it is not quickly and thoroughly dried and kept dry, the planks become covered with moulds and fungi, which cause them to adhere to each other. This disadvantage is not possessed by the wood of *A. moluccana.* This last, also named *Djeungdjing laoet*, is in these regions mostly designated *Albasia* (See No. 1) by the nhabitants. Of one variety (?) named *Djeungding eutak* the wood is totally useless. It shrinks to such an extent, that a plank becomes not only much smaller, but wholly distorted.

21. *Djoenti.* This large-leaved tree, with very small blossoms, is seldom met with. Superficially it resembles *Djati* or *Sĕmpoer.* It grows in *tĕgal* districts, intermixed with *Malaka, ki-bodas, hintinoe,* &c. The wood is reddish-colored, pretty strong, but coarse.

22. *Djoewar.* *Cassia* spec. Very suitable as a shade-tree along big roads. The wood is much too hard for tea chests.

23. *Gadok.** *Bischofia* spec. Very useful for tea chests, but largely attacked by boring chafers.

24. *Galinggĕm.* *Bixa* spec. More suited for living *pagers.** When well pruned the tree grows pretty high and stemmy and possibly suitable to be sawn into planks. The wood is also sufficiently solid.

25. *Hamerang.* *Ficus.* (See No. 42 *Kiara.*)

26. *Hamiroeng.*** *Vernonia* spec. A forest giant, belonging to the family of the Compositæ (in this respect unique ?). When planted from seedlings in the forest, the tree, with good pruning, grows up vigorously, but it has still to be seen to what dimensions it will attain. The wood is exceptionally suitable for tea chests.

27. *Hampelas.** *Ficus* spec. This variety of Ficus differs from all others by having a wood very suitable for tea chests. As in the leaf, which is on that account used as sand-paper, so the wood also appears to possess siliceous deposits, which render it tougher.

28. *Hantap.* *Sterculia* spec. The wood of the *Hantap* is, *faute de mieux*, useful. The treo, which becomes very large, allows itself to be planted everywhere freely, and planted along roads forms beautiful avenues. The scarlet-red fruits have a pretty effect.

* Enclosures, fences.—*Tr.*

29. *Haroeman.* *Albizzia* spec. (or *Pithecolobium* ?). The wood is bad and moulds very rapidly.

30. *Hoeni.* *Antidesma* spec. Hard wood.

31. *Hoeroe.* The number of varieties of *Hoeroe* is legion, and very different in appearance. The best known are *H. manock* (*Acer* spec. ?), *H. koneng, H. batoe, H. pajong, H. leuĕur, H. hiris.* All yield a not very durable timber, which is however very useful for tea chests.

32. *Kadoe.* *Durio* spec. The well-known prized and abhorred Durian. At 3000 feet gives fine large trees, but small tasteless fruits. The wood is rather bad.

33. *Kajang.* *Quercus* spec. Among the Javanese oaks the "*Pasang*" is the most known, but the "*Kajang*" is apparently the best. The wood of the *pasang* is white and coarse of fibre. The red heart-wood is not inferior to the best European wainscoting. When freshly cut and sawn however it may split. It is very durable, when waxed or polished is prettily veined, and is impregnable to white-ants. In some forests the tree is found in large numbers. It is erroneous to speak of *pasang-kajang, pasang-kihioer,* &c.

34. *Kaliage.* A shrub, with twining branches, which sometimes attains the compass of a tree. The long, hard and sharp thorns are rightly very much feared.

35. *Kalikĕtan.* *Croton* spec. (?). Perhaps a corruption of *kaliki-oetan* (Filet 3321). In other places also called *ki-rantja.* The treelet is suited for living *pagers*, always handsome, either from the bright-red young leaf, or from the white clusters of flowers, or from the red berries. Deserves to be planted in gardens.

36. *Kalimorot.* *Castanea* spec. Good building timber, not suited for tes chests.

37. *Kamoening.* *Murraya* spec. Very hard wood, yellow-colored, seldom in dimensions of any consequence.

38. *Kananga.* *Cananga* spec. Coarse-fibred, pretty trong wood.

39. *Kanjere.* *Briedelia* spec. Seldom attains sufficient dimensions.

40. *Karet.* *Ficus* spec. (See No. 42 *Kiara.*)

41. *Karumbi.* *Carumbium* spec. A small treo, is not much noticed. Useful as undergrowth in forest planting.

42. *Kiara.* *Ficus* spec. The wood of all varieties of *Ficus, Urostigma*, or *Covellia* (with the exception of *Hampelas* No. 27), is too weak for tea chests; some of them are only of value from their regally handsome growth, others as produces of caoutchouc. The genesis of the *Kiaras*, sometimes in the tops of other trees, is very interesting. The seeds are apparently deposited there in the dung of birds. The young plant sends downwards a rootlet as fine as a spider's thread, which at length reaches the ground and ends by becoming a stem that entirely overpowers and overgrows the supporting tree. Sometimes the supporting tree continues to live; and then one sees in a *Kiara* some branches with entirely different foliage, for instance of *Teureup*; sometimes it dies and then forms a hollow cavity in the *Kiara* stem. When the primeval forest is felled and burnt such a *Kiara* chimney may sometimes stand for several days flaming and smoking. Sometimes two or more varieties of *Kiara* are found grown together on one stem, but bearing various leaves and fruit at different times.

43. *Ki-bako.* A quick-growing tree recommended by natives and easy to plant. Wood not yet tested.

44. *Ki-bodas.* *Blackwellia* spec. Exceptionally hard and durable wood, difficult to work. The tree belongs to the *tĕgal* flora and is proof against the yearly burning-off of the high grasses around its foot. This peculiarity it has in common with *Malaka, si-hiang, hĕnpoer,* &c.

45. *Ki-ĕndog.* *Xantophylum* spec. A very large tree. Handsome white building timber, hard and very fine of texture.

46. *Ki-hiang.* *Albizzia* spec. A *tĕgal* tree. Very hard and heavy wood. (See No. 44.)

47. *Ki-hioer.* *Quercus* spec. (Filet). (See No. 33 *Kajang.*)

48. *Ki-hoë.* *Cupania* spec. Very strong and tough wood.

49. *Ki-laki.* *Grewia* spec. (Filet). Small and insignificant.

50. *Ki-leho.* *Sauraya* spec. Weak and unusable.

51. *Ki-meong.* Easy to raise from seed. A handsome tree, with very strong, hard wood. Perhaps suitable for the planting up of roads.

52. *Ki-merak.* *Podocarpus* spec. This pine yields a handsome furnitnre wood, useful for all kinds of purposes; too good for tea chests.

53. *Kina.* *Cinchona* spec. div. From the wood of large *C. succirubra* tea chests can be made if need be. It is however somewhat too heavy and brittle for this purpose. It is of more use to the tea-and-cinchona planter as firewood for his drying machines, &c., &c., as well as for *pagers* and for posts for nursery beds &c. It is very durable.

54. *Ki-oraj.* This name appears to be applied in other parts of the Preanger to othor varieties of trees also. Here it is generally used to denominate a not thick, but pretty high tree, which is met with in groups, with fine handsome foliage and small white papilionaceons blossoms. Apparently very suitable for shade-trees in coffee gardens, not subject to the diseases of the Albizzias. Rather hard wood.

55. *Ki-poek.* *Pithecolobium* spec. This handsome tree, generally thick, of a dark green shade, allows itself to be easily planted from the black beans. The wood is little known, but may possibly be as useful as *djengkol.* Time must decide this.

56. *Ki-poetri.* *Podocarpus* spec. (as No. 52 *Ki-merak*).

57. *Ki-sampang.** *Evodia* spec. This tree much deserves attention on account of its beautiful white wood and quick growth. In forest plantations it sometimes springs up of itself in large numbers.

58. *Ki-sera.* *Cinnamomum* spec. (Filet). This fragrant wood is very hard, strong and durable. Its home is in the primeval forest.

59, *Ki-tedja.* *Cinnamomum* spec. Also a variety of wild cinnamon, found everywhere. Little or no odour. Hard building wood.

60 *Ki-tiwoe.* *Meliosma* spec. Bad and useless.

61. *Ki tjareuk.* A forest-growing, straight-stemmed tree, with a leaf that consists of unlike halves (as in the Begonias). Is recommended by the natives. Wood not yet tested.

62. *Koekoen.* *Schoutenia* spec. Also called *Walikoekoen.* Magnificently strong and pliable wood One finds many shrubby-growing specimens, seldom a proper tree.

63. *Koeraj.*** *Sponia* spec. In woody districts, between 4000 and 5000 feet, the tree *par excellence* for tea chests, although indeed somewhat difficult to saw in a moist state, from its great fibrosity, owing to which a plank of it appears as if covered with wood, yet easy to plane, light and sufficiently strong. Also little subject to decay. After the felling of the primeval forest, the *Koeraj* springs up *en masse* and in a short time forms a new forest. Planted in more open, lower-lying regions, the tree languishes very much, and is subject to diseases, which often cause it to die outright.

64. *Kondang.* *Ficus* spec. (See No. 42 *Kiara.*)

65. *Kopeng.* *Ficus* spec. (See No. 42 *Kiara.*)

66. *Kopo.* *Jambosa* spec. This tree strikes the eye chiefly in the blossoming season, when it is covered with rich white-rose flower-clusters. The wood is hard.

67. *Lame.* *Alstonia* spec. Quickly attacked by insects. Otherwise really good wood.

68. *Limoes.* *Mangifera* spec. A handsome tree, especially in the blossoming season. Hard building wood.

69. *Loa.* *Ficus* spec. (See No. 42 *Kiara.*)

70. *Mala.* *Liquidambar* spec. Among Europeans better known as "*Rasamala.*" The natives say for short "*mala.*" The king of trees in Java. The wood is often not sufficiently valued, apparently because one frequently bases one's opinion upon timber delivered by contract, which usually consists of comparatively young wood, the most manageable stems, quite sufficient for the required dimensions. The hardest-wood of old, thick trees differs therefrom very much, and is extremely solid. In the primeval forest one sometimes finds trees fallen from immemorial times, the bark and sap-wood of which have entirely decayed. Such a stem then forms a natural wall, into which the foot sinks when one steps upon it. The heart-wood is then still quite sound and apparently far superior to freshly cut wood. Planks of good *mala* wood lie in the open air, exposed to wind and weather for 20 years and perhaps longer, without rotting. The sharply defined territory of the tree is peculiar. On the Goenoeng Tiloe some portions of the forest consist almost entirely of *malas*; on the flat adjoining Malabar the tree is entirely absent. Yet it allows itself easily to be planted from seed, and there are 10-year old specimens that are growing vigorously.

71. *Malaka.* *Emblica* spec. One of the hardest and most durable varieties of wood. One can seldom get a fine, perfect piece of wood. Most of the stems are hallow and full of holes. The tree grows in open *tegals*, and does not die when the grasses are burnt off.

72. *Manglid.** *Manglietia* spec. (See No. 3 *Baros.*)

73. *Mara.*** *Mappa* spec. (or *Pachystemon?*). The green-leaved or *Mara-tegal* is not so suitable, although also useful, as the brown-leaved or *Marabeureum.* This tree allows itself to be freely planted, grows quickly, and yields a wood that has exceptional qualities for tea chests.

74. *Mindi.* *Melia* spec. The experiment tried (at 3,000 feet) with this tree for the first time lately in the Preanger has not been successful. The wood is soft and very liable to split. The tree grows up quickly, but, unless planted in favorable spots, the growth speedily comes to a standstill. Perhaps better suited for lower districts.

75. *Moentjang.* *Aleurites* spec. This wood, to be met with in great quantity, must alas! be condemned. The quality is too bad.

76. *Nangka.** *Artocarpus* spec. Although somewhat hard and solid, this wood must not be rejected, especially as it is to be had in pretty large quantity. The tree grows well on all kinds of soil, and as a fruit tree has scarcely any value. It is best to use this wood mixed with lighter kinds. Some planks of *nangka* or *waroe* wood, especially for nailing up strongly the bottom or top, add much to the strength of a tea chest. Also very suitable for clamps.

77. *Panggang* *Paratropia* spec. Unutilizable. The wood fibre is always twisted in spirals, and splits correspondingly.

78. *Pari.* *Mangifera.* A tree from the primeval forest. Heavy hard wood.

79. *Pasang.* *Quercus.* (See No. 33 *Kajang.*)

80. *Peer.* *Ficus.* (See No. 42 *Kiara.*)

81. *Peuteuj.* *Parkia* spec. Forms high, very fine trees. Hard wood. Apparently well suited for tea chests.

82. *Peuteuj-selong.* *Leucaena* spec. Too small to be noticed. The wood is besides exceptionally hard.

83. *Poeloes.* *Laportea.* Small trees in the primeval forest, without value. The leaves, which look harmless, burn so severely on being touched, that one feels the pain even after 6 weeks, especially when the burnt part comes in contact with cold water. It appears that vitreous hairs are left sticking in the skin. Natives when in the forest never fail to warn persons following them.

84. *Poespa.* *Schima* spec. Big forest trees with hard timber, resembling that of *mala*, but inferior to it. The tree can be easily planted, and is once a year fiery red from the new young leaves, by which one can recognize the *poespas* at a considerable distance

85. *Ramboetan.* *Nephelium* spec. At 3,000 feet the tree seldom yields fruit, and then only small, sour ones. Nevertheless it grows well, and is suitable for planting along high roads. The wood is too hard for tea chests.

86. *Randoe.* *Eriodendrum* spec. The tissue of the kapok-tree can scarcely be called wood, and is perfectly useless, even as firewood.

87. *Rengas.* *Gluta* spec. Very handsome timber. The cutting of this wood causes swelling of the face and hands; this peculiarity condemns the tree.

88. *Sanintén.** *Castanea* spec. Very abundant, very useful timber, although somewhat hard for tea chests. It is also very quickly attacked by white-ants and *boeboek* or *toko* (boring chafers) and is therefore especially very inferior to oak-wood.

89. *Sĕmpoer. Dillenia* spec. Especially at home in the *tĕgals* of the low-lying districts and proof against fire, Exceptionally hard wood. Another kind or variety is called *Sĕmpoer tjai.*

90. *Soeren.*** *Cedrela* spec. div. The quality of the *Cedrelas* indigenous to Java is very various. The *soeren* wood is mostly very suitable for tea chests. For planting, these trees are not to be recommended, Outside of the forest they suffer badly from diseases and soon die. It is otherwise with the Sumatran *Cedrela serrulata*, commonly called *Soerian*, and now universally distributed in the Preanger even by the natives, freely planted. Few varieties of wood are so useful for all kinds of purposes, It is tolerably strong, easy to work, prettily marked, on which account it can be used for polished furniture, and durable, and also not exposed to white-ants. The sap-wood also and that of young trees does not differ much from the older heart-wood. Even for building timber it is very satisfactorily strong. Tea chests made of this wood leave nothing to be desired. The growth of the tree is however not yet quick enough. At 3,000 feet about 15 years are needed to produce a beam of 20 × 20 cm.; with very favorable growth 25 × 25. Older trees are frequently hollow. Of the indigenous *Cedrela odorata*, the well-known cigar-box wood, specimens have been planted, which grow well, but even up to *ca.* 6 years of age yield no seed.

91. *Talingkoep. Claoxylon* spec. A tree, that attains to no large dimensions, but gives hard, durable wood. Is very abundant.

92. *Tangkalak. Lepidadenia* spec. (Filet). Soft, bad wood.

93. *Tangogo. Castanea* spec. (Filet). Hard timber. The best of the *Castaneas.*

94. *Teureup. Artocarpus* spec. A very large tree with very bad wood,

95. *Tisoek* * *Hibiscus* spec. Leaf and blossom greatly resemble those of the *waroe* No. 100. As fantastically and crookedly as the latter grows, so straight as a candle the *Tisoek* shoots on high. For some purposes, among others for building, it is therefore more useful, although it is not so solid as *waroe.* The *Tisoek* however does not attain to the bulky dimensions of the *waroe.* The natives often disfigure and damage the tree by lopping so high, that only a small crown remains at the top. Useful for tea chests

96. *Tjangkring. Erythrina* spec. (See No. 12 *Dadap.*)

97. *Tjangtjaratan. Nauclea* (Koordeers). A straight-stemmed tree. Hard timber.

98. *Tjaringin. Ficus* spec. (See No. 42 *Kiara.*)

99. *Toëngeureuk. Castanea* spec. Hard timber.

100. *Waroe.* * *Hibiscus* spec. A very useful wood when one needs great breadth and little length. For tea chests also, *waroe* wood, although somewhat heavy, and difficult to sow owing to its fibrosity, can be used with advantage. If some planks and the clamps consist of *waroe* wood, the chests are very strong. The tree grows everywhere and is not fastidious. A drawback is, that many trees become as if overgrown with parasitic plants "*Manganden*" (*Loranthacea*), which frequently cause the otherwise so strong tree to die. This tree is very intolerable, just like bamboo. All that grows within reach of its roots languishes.

A. E. KERKHOVEN.

FRUIT CULTURE IN THE HILLS.

"Cosmopolite" writing from Simla to our esteemed contemporary *The Statesman* endeavours to show that a writer in *The Madras Mail* takes a very pessimistic view of fruit culture; the correspondent of the latter journal deals entirely with orchards which have been started in the Nilghiris, and have, according to him, turned out dismal failures. The picture he draws is no doubt a gloomy one, and when one reads of the many drawbacks unfortunate proprietors have to contend against, he would indeed be a bold man who would sink capital in such an industry. Here are a few of them as related by the Nilghiri writer:—

"I can recall the case of a gentleman who at great expense imported some expensive varities of dwarf fruit trees from home. After patient waiting in due course the fruit set and began to ripen under its owner's eyes, but when about half-ripe the unhappy man found to his disgust, on entering his orchard, that not only had the fruit been stolen but the branches broken off with it. And worse was to come, for the following year the plants were found with their stems cut off close to the ground, in some cases actually rooted up and carried away! Though this fruit-grower had comparatively few animal and bird enemies to contend against, since he was living in Ootacamund itself, the *genus homo* proved almost too much for him. In another case a fruit-grower enclosed his little garden with a trench and a wall about three feet high. This proved ineffectual to keep out sambur, which vaulted over and did infinite damage nibbling off grafts, etc. Porcupines followed in a way best known to themselves, and they rooted up pineapples, and ate the rippening melons, and cucumbers, and tomatoes. When the porcupines were excluded the rats and squirrels came in and nearly completed the ruin of the orchard. By day the place was infested with birds, that nothing short of shooting could drive away. The depredations of beetles, plant-lice, bores and other insect pests, though serious enough, can almost be passed over in comparison with these troubles. In addition, in this case, the would-be fruit-grower suffered from the depredations of his own servants, who went in one night and gathered some pines that were ripening and by their clumsiness destroyed several of the plants, As the pines were a valuable variety the owner's loss was a heavy one. It may not be generally known that the jackal is a terrible enemy to the fruit garden, Coffee planters know to their cost what he can do to their coffee. He will eat anything in the shape of fruit that he can reach—strawberries, Brazil cherries, melons, figs, etc. and the fable of the fox and the grapes has a practical significance for the fruit-grower which perhaps it may not have for others. The toddy-cat of the plains has a cousin on the Nilghiris who practically lives on fruit. It is a black greyish animal with white spots and more mischievous than the jackal, from the fact that it can climb trees and reach any fruit.

Now we have a firm belief that the real enemy to European fruit-growers is the gentle Aryan, and not the insects, birds, or animals which agriculturists all over the world have to contend against; and there is no doubt that as things stand at present, this enemy is unconquerable.

"Cosmopolite" in *The Statesman* takes a much more hopeful view of the industry and shows how successful it has proved elsewhere, He says:—"My main object, however; in writing to you is not to comment on the failure of fruit culture in the Madras Presidency, but to set off against it the marked success which has attended that enterprise in the Himalayas. Indeed, so hopeful have been the results that the N. W. Himalayas bid fair to realise the proud distinction of becoming, what they have been called, the orchard of India. Let me glance at the results of an experiment which has scarcely lasted a dozen years.

"Formerly Simla used to be supplied with fruit from Naini Tal, and up to 1883 seems to have been destitute of any gardens of English fruit trees, except perhaps a private one on Summer-hill. Since then, however, Annandale has been covered with fruit trees bearing apples, pears, apricots, grapes, etc., no less than 5,000 plants having been grafted in its soil. Private enterprise has also been busy in the same direction, and Simla now numbers about a dozen gardens, owned by residents, containing 2,000 to 3,000 trees bearing English fruit.

"I do not possess particulars of the cultivation on the Kulu range of hills, which are visible from Simla; but Kulu apples have already gained a name in the market. Indeed, it has been established that apples, and pears flourish on high elevations, and if we compare the English fruit produced in these parts from imported seeds or grafts with the miserable small spongy and tasteless fruit known in Calcutta as Cabul apples, the enormous advantage of having Himalaya fruit instead becomes at once apparent.

"Imagine for a moment the improvements in the Calcutta market were scope afforded for the supply

of English apples from the hills, to say nothing of pears apricots, grapes, strawberries, and other smaller fruit —why, you would be better off there than you were even in the days in which American apples used to be imported with iee, and sold at the rate of eight for the rupee. I have tasted better apples here than ever I did in Calcutta in the best days of American apples. And the experiment of importing apples from Australia would have no chance against fruit which could be put in the Caleutta market within four or five days of its being plucked. The Calcutta market, moreover, is only a single place where Himalayan fruit could be offered for sale. All the stations along the railway route, and indeed every accessible spot on the plains, would be available for the sale of the Himalayan fruit, were culture attempted on a large scale."

All this is perfectly true, but we are inclined to think that in the Nilghiris the wrong sort of people went in for the industry and that the system they worked on was rotten. They were evidently people who did little or no work with their own hands, but small capitalists who planted orchards near villages so as to obtain cheap native labour. Result, villagers reaped and ate of the fruit with gusto after having drawn good wages to grow and guard it. The proprietor's profits might be gauged solely in an expensively bought experience and a profound knowledge of the capacity of his Aryan brother in the picking and stealing line.

But there are evident signs that a revolution is looming over Anglo-Indian society, the depreciation of the rupee is bound to affect even those moving in the highest grades, much more so the middle and lower classes, and they will no longer be able to send their children home for education or go there so frequently themselves. Schools therefore must yearly increase in numbers and be gradually followed by the hills of India being colonised by many of the parents of children educated there. To supply these colonies and schools with vegetables, fruit and poultry, we look to the poor white and a robust class of Eurasians who will start small farms, market gardens and orchards, woking themselves without the aid of native subordinates such people ought with fair work and economy to be able to make a far better living in the Himalayas or Cashmere than they would be able to do in a country so played out for agriculture as England. Calcutta and most of all the big Indian cities suffer during the hot weather from a want of English vegetables and fruits, but so far our hill stations can scarcely supply local demands, Let Government encourage soldiers who have served their time to settle out here andaid them with lightly rented land grants and small loans where necessary,and the worthy folk will soon create a valuable industry and colonise the hills with a race from which India can cull her future soldiers and policemen.—*Indian Planters' Gazette.*

ANACARDIUM OCCIDENTALE, *Linn.*

(THE CASHEW NUT.)

The fruit of Anacardium is well known to West Indians, who besides eating it in the fresh state, make conserves of it in various ways. Though sweet, it is at the same time very astringent and said to be useful in cases of dysentery and diarrhœa. Many and various are the effects with which this tree, its fruit, bark, leaves and seeds are credited, and if all were true, it would indeed be one of the wonders of nature. It is said to possess aphrodisiacal properties, the leaves to be capable of producing drunkenness, the nuts or seed when roasted to excite the faculties, especially memory, so much so that a confection made therefrom has been called *Confection des Sages*; and the oil from the nut is said to be epual to that made from the finest olives —while an acrid oil is produced from the epidermis of the nut, which is said by Barham in *Hortus Americanis* 1794 to "cure *herpes*, and cancerous and malignant ulcers abounding in rotten flesh; it also kills worms in ulcers, and chigoes, it takes away freckles and liver spots, but it draws blisters and therefore must be cautiously made use of." "It has been observed that poor dropsical slaves that have had the liberty to go into a cashew walk, and eat what cashews they pleased, and of the roasted nuts, have been recovered." Another writer brings an indictment against the West Indian fair sex for using it as a cosmetic when they have become tanned by exposure to the sun. He describes the process as follows: "They take a nut, scrape off the outside skin, and rub their faces with the exposed oily surface. The face swells and blackens, but ultimately the tanned skin peels off; and although the process necessitates rigid retirement for a fortnight, at the end of that time they "re-emerge with a new skin and complexion as fair as a babe." It has been also stated that the oil is to be found useful in Leprosy and that the fruit is a cure for the disorder which causes the patient to become what is known as a *dirt-eater*. The oil is probably worthy of further examination, but in the absence of a Physiological Laboratory prepared to undertake original work we are bound to obtain the interest of workers in European or American Institutions; and as these are for the most part fully engaged, it is somewhat difficult to secure their interest for the examination of tropical productions.

The tree produces a beautiful clear gum, which makes a fine varnish, and is said to possess especial virtue in preserving woods from insects. The sap of the tree, like its congener *Semecarpus anacardium*, produces an indelible stain upon linen. Professor Lindley makes Martius responsible for a statement that the nut has a wonderful effect upon chronic inflammation of the eyes, especially such as are of a scrofulous nature, when simply borne or carried by the persons affected. It is also a common belief in Trinidad that a necklace collar of Cashew nuts have a remarkable curative effect upon some of the diseases of the Canine Race, especially for coughs, or distemper.—J. H. H.—*Trinidad Bulletin.*

CULTURE IN WESTERN AUSTRALIA.

It is pleasant to learn, through the agency of the Agent-General, that fruit and vegetable culture are making satisfactory progress in the far-away auriferous portion of the globe which has so rapidly risen into fame all over the world. Orchards and vineyards are gradually being developed in valleys where rivers or streams of any capacity run, and in some places, as in Perth, we are told that Grapes are sold at 4d. per pound. Apricots, Peaches, and Melons also are gradually coming into market, and Strawberries, Raspberries, and Currants are to be found here and there. Of course, where the rainfall is limited in extent, cultivation is a ticklish job, but then irrigation is made to assert its beneficent power, and as population grows, so also does the extent of acreage under fruit and vegetable cultivation. Land is cheap enough, for it is stated that the cost of freehold in farms is something like 10*s*. per acre, the payment being extended over twenty years =6*d*. per acre per annum! And so, possibly, it may come to pass that alluvial gold may by-and-bye be found more easily of acquirement than diluvial—as in California. By-the-way, it may be noted that fruit trees and cuttings are sent from both New South Wales and South Australia. We are reminded by the Agent-General that grass seeds are now placed on the free list of imports, as well as garden seeds. In the tariff-free list are to be found bulbs, fruit, and ornamental trees, scions and grafts, manures of all kinds, plants, and Vine cuttings. The following pay a duty of 5 per cent. *ad valorem*:—Agricultural, horticultural, and viticultural implements and machinery (not garden rollers); wire netting and steel fencing wire, standards and staples.

The increase in the value of timber exports is surely worthy of mention here. In 1893 the value of this export was £33,848, last year this had increased to £74,809. It may not be generally known that the forest region of extra tropical Western Australia occupies an area equal to the whole territory of Great Britain—the intratropic zone of forest is also enormous, and there is many an indication that as time goes on more and more of the timber produced in those regions will find its way to the mother country. *E.C.*—*Gardeners' Chronicle.*

SEAWEED.

We should be glad to know if there are any among our readers whose experience would confirm or the reverse, a statement made to us that seaweeds will not grow upon coral. Perhaps that statement should be qualified by saying that it was intended to apply in a limited sense only, and that it is admitted that certain of the finer seaweeds attach themselves to coral, but that the formation is deficient as affording a holding for those luxuriant growths such as are everywhere seen along the shores of Great Britain and furnish such a valuable supply of manure. It cannot be disputed, we believe, that around the coast of Ceylon there is a singular deficiency of seaweed. It is to be found, but only in certain localities, and there only in limited quantity. Undoubtedly this is a loss to agriculturists near our sea-shore, and we have been asked if we can explain the deficiency. It will be easy to afford this explanation, if it be correct that the coral of which so large a proportion of our marine barriers consist does not give the required foothold for the larger and stronger growths. We fancy that the same cause operates that we assigned as the reason for the sparseness of shingle on our maritime beaches when discussing that subject some years back. Rock formations are scarce upon our coast lines. Were these more common, we believe not only shingle but seaweed would be both more abundant than they are. We know that the fine rocky headland upon which Fort Frederick stands at Trincomalee is abundantly supplied with seaweed. The Galle harbour, too, where there is a good deal of rock "between wind and tide," furnishes a considerable amount. We have always understood that large seaweeds will only grow when the above condition exists. They must be exposed to the air between high and low tides. If we are right as to this, it must follow that the very limited range of our tides would largely account for the scarcity that is so strongly noticeable along our coasts. If to this cause may be added that asserted to be due to the unsuitability of coral for the promotion of growth, we can have no difficulty in giving the explanation asked of us. But it would be a satisfaction to know if the statement as to that unsuitability can be confirmed, or if it is known if rocks of granite type exhibit in any localities the same absence of seaweed growth as is noticeable in the case of coral.

VENEZUELA.

Everything connected with Venezuela has at the present time considerable interest for all English readers. A lengthy article appeared in *The Times* this week dealing with the condition of affairs in that South American republic, and the extract from this that follows will have a special interest for Ceylon as still a coffee-producing country. It cannot be all beer and skittles to conduct planting operations under the conditions mentioned in this extract :—

Coffee is the main staple of Venezuelan wealth, the cultivation extending in more or less degree to all districts of the Republic where soil and climate are suitable. The port of Maracaybo ships annually some 30,000 tons from the Andine States adjoining Colombia, Puerto Cabello about 7,000 tons from the country round about Valencia, and La Guayra from 12,000 to 13,000 tons from the districts within reach of Caracas. Venezuelan coffee deservedly bears a high reputation, and would gain still more in favour if greater attention was paid to the method of cultivation and preparation for the market. The total area under coffee is estimated at from 180,000 to 200,000 acres, and the average yield at a little under 5 cwt. per acre. The plantations have a neglected appearance generally—knee-deep with weeds and the trees unpruned and uncared for. The coffee is grown under shade trees, forming a strong protection from the hot sun. The total cost of cultivation and other charges up to the time of the delivery of the bean in a marketable state in Caracas or elsewhere is calculated at about 35s per cwt., thus leaving a considerable profit to the grower at present values. But many drawbacks exist to deter Europeans from embarking in the enterprise. A revolution breaks out, and the male labourers are requisitioned to serve as soldiers on one side or the other. Other difficulties incidental to these South American countries are always liable to crop up. In the sitting room of Mr. Middleton, her Majesty's former Minister Resident to this country, are two large watercolours. The one represents a coffee plantation at 8 a. m. everybody smiling and happy, and the routine work in full swing; the other shows the same place at 5 p.m., with dead and wounded men on all sides, and and fierce firing going on between the Government troops and the insurgents. I know of no better example of the risks to which the owner of a coffee estate is constantly liable. All these dangers are equally present to the grower of cocoa, and, indeed, to any undertaking necessitating the employment of large numbers of labourers. Under such circumstances it is not a matter for wonder that merchants or others making advances against crops should ask and obtain unusually high rates of interest. The coffee or cocoa, once ready for the market, is despatched on the backs of donkeys or mules to the nearest commercial centre, and there bought for shipment to Europe or the United States. —London *Cor.*

PLANTING PROGRESS IN BRITISH NORTH BORNEO IN 1895.

The *British North Borneo Herald*, of Jan 1 says :—During the year considerable progress has been made in the cultivation of general products. We subjoin notices of the principal items :—

COFFEE has been started in one or two new localities, as, for instance, at the seventh mile stone outside Sandakan, on the Beaufort road, where a Chinaman has planted some 50 acres, while most of the existing estates have been enlarged. The following is the monthly crop of coffee in parchment since June last from the Byte Estate, which is estimated to be about 170 acres, and the average age about 2 years 10 months in July, to 3 years 3 months in December.

July ..	pcls.	23.58	October ..	pcls.	65.02
August ..	,,	33.36	November..	,,	84.22
September	,,	44.73	December	,,	

The monthly advance shown by these figures cannot be considered as otherwise than very satisfactory. The crop is delivered in Sandakan on about the 30th of each month where it is at once sold, and the money sent up to the estate in time to pay the wages on the 1st. Byte clean coffee has been sold in Singapore at $42·75 per picul for the whole parcel, the outside quotation then being $43; and the better lines of a shipment from Taratipan fetched 89s per cwt on the London market.

The end of the year sees coffee coming in from Byte, Kabeli, Loong Piasow, Segalind, Western Jarvis, Sebuga, Taratipan and Kudat; the price in Singapore is $45·60 per picul—higher than it has ever been before; and at the Byte, Taratipan, Kinabatangan Buluno and other places further fresh clearings are in progress for immediate planting.

GAMBIER.—This cultivation is extending steadily at Melinao; three boiling houses are at work and two more will be erected by June to meet the requirements of the young plants now some months in the ground, and it is anticipated that the monthly output will then be 180 piculs. The gambier produced is of the best quality and finds a ready local sale at full prices. Felling for fresh gardens is in progress.

COCONUTS.—This cultivation has only been seriously commenced by Europeans during the last four years, but now at a great many different places round the coast, coconut plantations have been started and fresh ones on an increasing scale are contemplated. As yet but very few of the trees are in bearing but when they once commence, the outturn of nuts will be continuous, and will increase until it becomes of large consequence to the country. Every month, at a rough estimate, something like a thousand fresh trees are planted at one place or another.

The dwarf nuts that bear in three years are being watched with interest.

MANILA HEMP.—The satisfactory growth of the plant producing this fibre has been fully proved, and in two or three places there are considerable patches of it, but so far difficulty has been experienced in getting a sufficient supply of skilled labour; several gangs of Sooloos that know something about it have been brought over, but after a short time they have always gone off to more attractive forms of work. Three hundred acres are being opened on home account opposite Loong Piasow and, at worst, natives easily learn the process of extraction by hand.

SUGAR CANE, has been experimented with in one or two places with satisfactory results so far as proving the extremely low price at which the raw material, the cane, can be produced, and its high quality and sugar-yielding capabilities, but up to the present the crushers used have been on altogether too small a scale; one is now at work on the Suan Lamba. It is urged that where the raw material is cheapest that is the place to erect factories for whatever the product may be, and nowhere is cane cheaper if so cheap as in North Borneo; and at the end of the year we hear that negociations are in progress for the erection of a crusher on a larger scale.

COTTON is on trial in one or two places and promises well. Some of the earlier planted patches were in rather lonely districts and were almost entirely eaten up by deer and wild cattle which seem to have a great fondness for it. The later plantings are in places where these animals will not come. The Park Reserve trees are in good bearing.

COCOA, SAGO, NUTMEGS and other products have been planted by Europeans in several places and in all instances promise well. Samples of cocoa have already been obtained.

TOBACCO.—The prices realized in the latter portion of the year did not fulfil the hopes based on the previous sales. Messrs. Binger & Herschell's "Review of the 1894 Borneo Crop" gives the average price all round of 100 Dutch cents, the London and Amsterdam Borneo Co. again heading the list with 138 cents. Koyah commanded 129 cents or with Lamag an average of 99 cents and Lahad Datu 114 cents. The average of the 4 south Maruda Bay plantations was 99 cents, Benkuka fetching 91 cents; the other plantations varied from 81 to 55 cents. The total arrivals at Dutch ports were 9,794 bales, approximately valued at $588,000. The present crops however are looking well and considerable progress had been made in cutting before the rainy season set in. At Bilit 630 piculs will be harvested and at Koyah 900. Lamag and Batu Putih are well advanced, the former averaging 5 piculs or a little more per field. Details from Lahat Datu and Maruda Bay are unfortunately wanting beyond the general assurance that the plantations are doing well.

PLANTING IN BURMA.

A planting contemporary points out the grand capabilities for planting enterprise offered by the Kachin Hills and the neighbouring immense tracts of primeval forest, but observes that the extreme scarceness and dearness tracts of labour in the district stands in the way. A correspondent who knows the parts in question believes "the whole country would be an ideal planting district especially for tea. The climate is suitable, and the soil good, but labour is most expensive, There will shortly be a railway, however, to Myitkynia, and produce would in no case be more than 40 miles away. During the cold weather there is a steamer service on the Irawaddy, and country-boats, which are fairly cheap, are to be had all the year round." The tea-growing region he believes to be one of the best in the world. The height of the hills ranges from 1,000 to 6,000 feet, and the rainfall is abundant—or, as he puts it, there is, "a fertile soil and heaps of rain." *Planting Opinion* asks for particulars as to the possibilities of introducing Chinese labour in that part of Burma, and points out that the district in question being conterminous with the Chinese frontier no insuperable difficulties should exist. We may observe, in this matter, that the Chinaman, though a steady and hard-working fellow as a rule, as soon as he leaves the Celestial country has a somewhat exaggerated idea of his own value, usually demanding and receiving wages that would make planting unprofitable if Chinese labour were largely utilised. It is a common thing in Darjiling to see Chinese carpenters who receive as much as R2-8 0 a day, whereas an equally skilful carpenter in Northern India would get only eight annas a day, especially in Behar. If coolies, therefore, and carpenters could be imported from Behar, as also from Dinapore, Patna, and other stations, it would be well. Coolies in Behar get no more than from two to three annas a day, and are glad to get that. Unfortunately, however, the coolie agent, in spite of all his blandishments, finds it difficult to persuade the average Behari to emigrate, even though his beloved country has nothing but semi-starvation to offer him at home.—*Madras Times*, Feb. 3.

THE REV. CHAS. McLEAN ON TEA IN AUSTRALIA.

The Rev. Chas. McLean writes from Geelong on 15th January:

"I write to ask if you can send to me by the first mail a package of your leaflets about *tea*, how to infuse it &c., and also a list of those who sell *pure* Ceylon tea in the towns in Australia. I have been a good deal about since landing in Australia, and so far those I have met are in dense ignorance about Ceylon tea. They do not know where to get it, and even those few who have had samples, do not know how to infuse it. The way here is to put the tea in a *tin* can and *boil* it for half an hour on the fire. You can imagine the result!

"We had a very fine voyage from Ceylon to Adelaide, where we landed, and since then have been travelling about a good deal principally in the Mallee country which is noted for its growth of wheat, and the manufacture of eucalyptus oil."

BRITISH CENTRAL AFRICA.

From a private letter just received from Mr. A. Whyte, formerly well-known in Ceylon, we extract as follows :—

Via Chinde, The Residency, Zomba, B.C.A.,

21st Nov. 1895.

I have often wished that I could write you from time to time, with some notes about this interesting country, but my duties are so numerous as to leave me no spare time for correspondence. I see, however, by the *Observer*, which I continue to *enjoy much*, that you are well posted up on what is going on here. By this mail I send you a report I drew up as to what we are doing towards establishing experimental gardens, and from it you may get a few hints as to the capabilities of our soil and climate. I should be sorry to pronounce the country *healthy for Europeans*, as our death-rate has been very high this season, yet it is not worse than, say, Lower Dikoya was when being opened up, and I have no doubt it will become annually more healthy. As to coffee, I do not hesitate to say, I think it is a safe investment here, and there is scarcely a tropical product which we could not grow with success. The country is still in some parts unsettled and insecure

from slave-raiding; but you will see by last *Gazette* that our Commissioner, Mr. Johnston, has gained a complete victory over Zerafi—our most powerful enemy. He (Mr. Johnson) is off again for a month to fight the Arab slavers at the north end of Lake Nyassa, and a tough job he will have; yet I have no fear of his ultimate success.

I am constantly sending home collections of the fauna and flora of the country, and many specimens have proved new to science, and of much interest to naturalists. It is a good game country, too, and the grand antelopes of Africa are still well represented on our plains.

I should like much to write you at greater length, but must deny myself that pleasure as time will not permit of it.

EILA TEA COMPANY, LTD.

A meeting of the Eila Estate Company Ltd. was held in the office of Messrs. J. M. Robertson & Co., Agents and Secretaries on 8th Feb. Mr. Henry Bois presided and present were Messrs. Percy Bois, Gordon Bois (Secy.), Herbert Capper and W. E. Mitchell.

The notice calling the meeting having been read, minutes of previous meeting were read and confirmed.

The CHAIRMAN explained that it was an *interim* meeting and it was not customary to bring forward a printed report, although the Articles of Association provided that a meeting should be held. The yield from the Eila estate during the six months ending 31st December 1895 has been satisfactory, but owing to an attack of helopeltis on Kanangama that necessitated the pruning down of the tea, the yield from that estate has fallen considerably short of expectations; but the visiting agent's last report indicated that the estimated yield for the whole year may still be realised and, in the meantime the directors recommend the payment of an *interim* dividend of 4 per cent. for the half year against 5 per cent. paid for the corresponding period last year. He thought that was all the information that required to be put before the meeting, but the Directors would be glad to reply to any questions bearing on the subject.

The report was adopted.

Mr. MITCHELL proposed that a dividend of 4 per cent. be paid.

Mr. HERBERT CAPPER seconded.

The motion was adopted and the meeting thereafter terminated.

WEEDS IN CEYLON.

It is difficult to understand why the planters of Ceylon have such a holy horror of weeds on their plantations. Here in S. India a certain and increasing number appreciate them more at their true value, and though not going so far as to encourage them generally, yet at certain seasons of the year, actually welcome their growth. In a late number of the *Ceylon Observer* there appeared an editorial on the extreme danger of allowing weeds to grow on estates. A moral is drawn from the agitation going on now in Australia about the spread of noxious weeds in pastures, and we are gravely informed that "the presence of a single estate in a district in which negligence in this respect (in clean-weeding) is permitted, may infect, so to speak, the whole of the area of that district." The analogy between pastures and tea-gardens may be very obvious to our contemporary, but for ourselves we fail to see the slightest connection between them. As an old coffee planter remarked to us the other day, a moral of more value might be drawn from the utter collapse of clean-weeded Ceylon coffee and the flourishing condition of our weedy S. Indian estates. By the way the danger to Australian sheep-growers lies in the seeds of certain weeds lodging in the wool, which greatly reduces the price.—*Planting Opinion*, Feb. 1.

SELANGOR PLANTERS' ASSOCIATION.

We have to acknowledge receipt of a copy of minutes of a general meeting, held at the Selangor Club on Saturday, 11th January:—

The Chairman, Mr. E. Carey, explained to the meeting that Government had intimated to the Association that the subject of discharge tickets for labourers had been under consideration, and although not prepared to pass a compulsory enactment, would be glad, as an employer of labour, to join in any equitable arrangement for the protection of employers against the wrongful employment of absconding labourers.

A draft of proposed suggestions to Government in connection with the above subject having been distributed to the members present, the following form was agreed to after some little discussion—viz.,

"That owing to the facility with which absconding coolies are at present able to obtain employment wherever they may offer their services, thus causing serious loss to employers, and laying the whole community open to the contingency of having the unpleasant charge of crimping preferred against them: it is desirable that immediate steps should be taken to put this question upon a more satisfactory basis, and with this object in view this Association submits for the consideration of Government the accompaying suggestions, the adoption of which it is believed will go far towards rectifying an evil which is becoming every day more apparent and which, unless checked, may lead to every serious results. It is therefore recommended that—

"All coolies being fresh arrivals in the State should be furnished with certificates to the effect that they are *bonâ fide* new comers, and therefore eligible for employment.

"All employers of labour, other than day labour, should be required under penalty of a fine of not less than......................to furnish a certificate of discharge to every cooly leaving their employ.

"It should be incumbent upon all employers, on a cooly applying for work, to demand from such cooly the production of his certificate either of arrival or discharge, and anyone found employing a cooly without such certificate, unless able to prove the cooly to have been a servant of his prior to the coming into effect of these rules, should be liable to a fine of not less than .. .. ..

"Employers should be entitled to demand from every cooly applying for and obtaining work, the certificate which he possesses on his arrival.

"In the case of labourers *employed and paid by the day*, whilst their obligation to produce certificates, as in para 3 should remain the same, employers upon settling their accounts, should be required to return to labourers the certificates originally produced by them, under penalty of a fine of not less than .....

"Such rules should not be enforced for six months after they have been agreed to.

"Proceeds of fines to go towards cost of supplying passes."

The Chairman informed the meeting that His Excellency the Governor had suggested to the S. P. A. deputation that the Hon. Secretary should address the Resident on the following subjects:—

(*a*) Written contracts with coolies;

(*b*) Preferential claim to mining rights;

(*c*) Arbitration on acquisition of land by Government.

A draft of proposed letter was then read to the meeting and agreed to.

The minutes of the S. U. P. A. general meeting, giving Mr. Hill's scheme for the importation of free Tamil labour, were read, and it was resolved that the subject should be left for discussion at the meeting of the United Planters' Association.

TEA IN AUSTRALIA.

A fair business has been done privately in China tea, sales comprising 2,900 half-chests common congou to medium panyong at 4½d to 6½d 100 half-chests panyong at 7¼d to 7¾d 200 quarter-chests buds at 5½d 750 quarter-chests medium buds, 160 quarter-chests buds at up to 7½d and 50 half-chests kooloo. Of Ceylon teas, 280 packages have been sold at prices ranging from 6½d to 11d. Of Indians, 50 chests have been sold at 6¼d. The auction sales on Friday last were quiet, and prices realised for Ceylon teas showed a decline, which in some cases amounted to as much as ¾d. The quantity of Ceylon offered was 389 chests, 183 half-chests, and 172 boxes, and the quantity sold was 239 chests, 136 half-chests, and 172 boxes. Fine pekoe and broken orange pekoe realised 10½d to 1s 1½d; pekoe, 6¼d to 9d; broken pekoe, 7¾d to 8½d; and pekoe souchong, 5½d to 6½d. Of Indian teas, 929 chests and 100 half-chests were offered, but sales were only made of 91 chests and 31 half-chests, at 6¾d to 10½d. At the auction sale of Indian teas yesterday (Thursday) only a small business was done, one of the catalogues being almost entirely passed in, as, although the bids were fully up to and in some cases over late market rates, the importers preferred to hold for an advance, looking at the character of recent advices from Calcutta. The total quantity offered was 2,655 packages ex "Argus," and sales were made publicly of 372 packages as follows:—Orange pekoe, 10d; pekoe, 6½d to 7½; broken pekoe, 6¾d; pekoe souchong, 6½d to 8d; and broken pekoe souchong, 6d. Sales have since been made privately of about 700 chests at an advance on auction bids. Cable advices announce the closing of the Calcutta markets for the season 1895-96, and recommend the holding of recent shipments for price.—*Australasian* Jan. 25.

MARKET FOR TEA SHARES.

Thursday evening, Jan. 23.

Since last writing a steady business at rather hardening prices has been in progress for nearly all Indian Tea shares.

FRESH ISSUES.—We shall in future allude to the Cachar and Dooars and to the East Indian and Ceylon Companies in the sequel under their respective headings.

Mincing Lane has shown a distinctly hardening tendency, and even the commoner classes of Teas are now fetching advanced prices.

CEYLON SHARES.—C. T. P. Co. ordinary are still wanted at 24½ upwards, but holders ask £25. The Prefs. were taken early in the week at 16¼, and have since changed hands at 16½, and more is now asked for them.

Ceylon and Oriental £3 shares changed hands as high as 3 3-16, or for the first time at a premium.

Eastern Produce and Estates Co.'s £5 shares are still asked for at 1½ without finding shares.

Lanka Plantations, after being rather asked for, are now sellers, and 5½ downwards would be taken for them.

New Dimbula.—In our last we strongly stated the price at which the "B" shares had been sold as £17, but we learn that the price was really £18, at which more business has since been done.—*H and C Mail.*

PLANTING AND PRODUCE

BRITISH ASSAM TEA COMPANY, LIMITED.—Adverting to the letter which appeared in our last issue referring to this company, we learn that at a subsequent meeting of the company the shareholders by a large majority passed the identical resolutions, as proposed by the directors, which had been negatived at the meeting of December 18th.

DEATH OF A WELL-KNOWN PLANTER.—It is with much regret that we announce the death of Mr. John Grant, who has been manager of the Needeem Tea Company in the Dooars since that company commenced operations some dozen years ago. No concern in the Dooars district has been more prosperous, or given more splendid profits throughout, than Needeem, and Mr. Grant is well-known as a very successful planter. Though not one of the very earliest pioneers, he was, we believe, the oldest Dooars planter remaining in the district. Mr. Grant was a native of Perthshire, and gained his first experience in tea in Sylhat, where he worked a few years before his engagement by the Needeem Company to open out their gardens in the Dooars. He long occupied a prominent position in the district, and was for years captain of the local Volunteers. He was widely known not only as a successful tea planter, but as a most kind-hearted, genial, and hospitable man. He passed away on New Year's Day, and his death is rendered all the more sad as he was just on the point of returning home from India for good, and had been contemplating this step for the last two years or more, without feeling able to break away from his congenial duties and surroundings as the time for saying good-bye approached. It seems too often the case with tea garden managers that they hold on a little too long. The sad news will bring much sorrow to Mr. Grant's many friends, and much sympathy will be felt for Mrs. Grant, who had gone home in advance of her husband, and is now in Scotland.

THE PRODUCE OF VENEZUELA.—*Apropos* the Venezuelan dispute, the principal industries of Venezuela are the cultivation of coffee and cocoa, cattle raising, the growth of sugarcane and its manufacture into sugar and rum for local use, gold mining, and the collection of natural products, such as vegetable ivory, ebony, and other woods, dyewoods, and a variety of articles of minor importance for exportation. Coffee is the main stable of Venezuelan wealth, the cultivation extending in more or less degree to all districts of the Republic where soil and climate are suitable. The port of Maracaybo ships annually some 30,000 tons from the Andine States adjoining Colombia, Puerto Cabello about 7,000 tons from the country round about Valencia, and La Guayra from 12,000 to 13,000 tons from the districts within reach of Caracas. Venezuelan coffee bears a high reputation, and would gain still more in favour if greater attention was paid to the method of cultivation and preparation for the market. The total area under coffee is estimated at from 180,000 to 200,000 acres, and the average yield at a little under 5 cwt per acre. The plantations have a neglected appearance generally—knee-deep with weeds and the trees unpruned and uncared for. The coffee is grown under shade trees, forming a strong protection from the hot sun. The total cost of cultivation and other charges up to the time of the delivery of the bean in a marketable state in Caracas or elsewhere is calculated at about 35s per cwt., thus leaving a considerable profit to the grower at present values. But drawbacks exist to deter Europeans from embarking in the enterprise. Revolutions are of too frequent occurrence.—*H. and C. Mail*, Jan. 17.

THE MANCHESTER DIRECT TRADE IN TEA.—The steamer "Clan Drummond," the second of Messrs. Cayzer, Irvine and Co.'s new service to Manchester from Calcutta, arrived in Manchester early last week. Her Manchester consignments included between 5,000 and 6,000 chests of tea, imported by Messrs. Johnson, Dodds and Co., whose efforts to establish a market in that city have met with success.

CAMPHOR.

CAMPHOR FROM LEAF OIL.—The recent high price of camphor, on account of the war between China and Japan and trade monopolies, has caused some anxiety in countries where it is largely consumed, says Mr. David Hooper, writing in the *Pharmaceutical Journal*, and China and Japan being at present the only two countries where camphor is produced on a large scale, it has been thought desirable that its cultivation should be taken up in other lands. In Japan the camphor trees grow at high elevations away from the sea, and only large trees of about one hundred years old are selected for use in making the camphor. From the export returns of this country it seems that the supply is gradually

becoming exhausted. In the island of Formosa the camphor trees are said to be by no means plentiful, and they grow only in certain favourable situations, as far as the climate is concerned, with savage tribes in the immediate vicinity. Here the trees are not considered worth taking until they are fifty years old, and the wood only of the roots and stems is subjected to distillation.

CULTIVATION IN INDIA.—The camphor tree grows very well in India. The Calcutta Botanic Gardens possess a fine avenue of trees, which were introduced in 1802. It grows well in the Ootacamund Botanical Gardens and in other parts of the Nilgiris. It has been planted, as an experimental measure, at Jhansi in the North Western Provinces, and in other districts in the plains Camphor has been known and used in India for many centuries. In A.D. 642 Indian princes sent camphor as a tribute or offering ing to the Chinese Emperors. At one time the tree flourished in Nepal and Tipperah, a large tract of land lying beween Bengal ahd the upper Irrawaddy. Within the present century camphor was imported from Chittagong but it has been said that the discovery of the hill-men of distilling it from the root led to the extinction of the trees,

OTHER COUNTRIES.—In Ceylon the camphor tree grows well at elevations of 5,000ft. and less; and it grows for ornamental purposes in Naples and other parts of Italy Professor Maisch in 1891 reported on the cultivation of camphor in Florida, where it flourished in almost any soil. California has lately become the scene of an industry which has for its objects the planting of the laurel camphor and the preparation of the oil for the American market. Thetree has also become naturalised in Java, Brazil, Jamica. and other isles of the West Indies, Mauritius, and Madeira. It is very evident that the camphor tree is able to grow very luxuriantly and extensively in the warmer temperate and tropical parts of the world, far removed from China and Japan, but the slow growth of the tree would prevent all but large capitalists from opening up plantations and waiting for the plants to sufficiently mature.

DISTILLING THE LEAVES.—As there is no definite information on this point to be found in any description of the industry, it was deemed interesting to try the effect of distilling the leaves. The first sample of leaves came from an umbrageous tree growing in the Government gardens at Ootacamund. Fifty pounds of the leaves in a fresh state was distilled in a large copper still with sufficient water for six hours. Eight fluid ounces of oil were separated from the distillate, giving the yield of essential oil 1 per cent., yielding 10 to 15 per cent. of camphor. The second sample was obtained from some younger trees grown at Naduvatam on the Nilgiris, a district more than a thousand feet lower than Ootacamund. The leaves were distilled in the same manner as in the previous experiment, but a large quantity of camphor condensed during the process and almost choked up the warm of the still. About four ounces of liquid were collected, having a mass of crystalline matter suspended in it. The oil from the Naduvatum leaves contained 75 per cent of camphor, which is a very satisfactory result. It is interesting to know that a large proportion of camphor can be obtained from the oil of the leaves, and from the leaves themselves, and probably, if taken from the trees grown at a much lower elevation, a much larger proportion of this useful substance could be collected.—*H. & C. Mail.* Jany. 24.

DRUG REPORT.

(From the *Chemist and Druggist.*)

London, January 16th.

ESSENTIAL OILS.—Oil of cinnamon-leaf is again somewhat dearer, 5½d has been paid on the spot, and there is no more to be had at that price. Lemongrass oil unaltered. Native oils on the spot 2½d per oz; for arrival 2⅝d. Citronella oil again slightly dearer, which sales of fair quality; usual conditions, on the spot at 2s per lb. but it is doubtful whether any more can be had at that figure, 2s 2d being the general quotation.

AMSTERDAM CINCHONA SALES.

London, January 16.

Our Amsterdam correspondent telegraphing on Thursday afternoon. states that at today's public sales of Java cinchona bark 5,149 packages, representing five-sixths of the supply offered, sold at an average unit of 3c per half-kilo, which is equal to the price paid at the last sales. The principal buyers were: G Briegleb of Amsterdam, representing the American and English manufacturers who bought an equivalent of 5,925 kilos of sulphate of quinine; the Auerbach Factory 4,111 kilos; the Brunswick Factory 4,616 kilos; the Amsterdam and Mannheim works 6818 kilos; the Frankfort-on-Maine and Stuttgart works 2,066 kilos; and general buyers 3,906 kilos. The prices paid ranged from 7¼c to 40c (equal to 1¼d to 7¼d) for Druggists' barks, and from 9¼c to 70¼c (equal to 1¾d to 1s 0¾d) per lb for manufacturing barks The tone throughout the auctions was firm. The total supply consisted of 6,133 bales and 268 cases of Java cinchona-bark weighing 595,219 kilos, are to be offered. The bark contained the large quantity of 32,473 kilos of sulphate of quinine, being an average of 5·53 per cent for the manufacturing bark —*Chemist and Druggist.*

MR. G. W. CHRISTISON ON TEA.

On Monday week Mr. G. W Christisou gave one of his practical, instructive, and much-needed lectures on tea at Goose Green, East Dulwich, London. The subject was, "Tea Culture and Manufacture in Darjeeling." At the outset the lecturer gave a brief account of the origin and development of Darjeeling as a British territory as well as a tea-producing district, showing that up till 1815 it was a *terra incognita*; that the first effort to grow tea was made by Dr. Archibald Campbell, the first resident Government official there; and that experimental plots of a few acres in extent were planted fourteen years later, the first tea garden on a commercial footing having been started in 1858, or possibly a year earlier. In a few words the features and situation of the district were sketched, and the area under tea and population (native and European) employed on the tea gardens and resident otherwise employed were given.

Every operation in connection with cultivation and manufacture was described and illustrated by effective lantern representations, from the clearance for planting out on the hill side with the felled timber strewn over it (a graphic account being given of the lively and exciting scene during the burning), to the carrying of a tea chest up the mountain path on the way to market by a hardy Nepali hill-man, to whose climbing qualifications and powers of endurance an evidently hearty, and no doubt well-deserved, tribute was paid.

We shall not attempt a full account of the lecture, but may allude in a few lines to one or two points that struck us most forcibly. There can be no doubt that, as pointed out by the lecturer, a matter of extreme importance on estates so excessively steep (as shown by the views) is careful cultivation, by terracing and drainage, to prevent loss of soil not only by the operations themselve. but by wash from the great rainfall which often comes down in sudden and heavy downpours. From the several views, and the description of the coolie houses, and their water supply, which was given, we can not only easily credit that "space, comfort, and sanitation are provided up to and in most instances in advance of the tastes and wishes of the occupants," and that "in most eases all is now being done for the coolies' comfort that is practicable and wise," and we fancy, from what we have learned from friends from the tea districts, that these dwellings cannot fall so very far short of some of those provided for European assistants in other districts within the last few years. The system of leaf-plucking was fully illustrated by views, diagrams, and description, also by groups of coolies at work on the hill sides. In regard to manufacture every operation was made clear from the weighing of the leaf on its entry to the factory, "green, fresh, but often wet," till its discharge from the drying machine, "crisp, wiry, and black," and up till the chest was sent on its way to market as referred to. The changes that take place upon the leaf during the various operations were clearly pointed out. Specimens of the various machines were placed on the

screen and their action explained. No one could fail to be struck by the immense advantages in regard to cleanliness of the Indian mode of manufacture by machinery, now all but universally adopted, compared with the antiquated and unsavoury methods of hand and feet manipulation still practised by the Chinese. Views of some of these reprehensible practices were exhibited in contrast to the approved modern Indian methods. Another point rendered strikingly clear was the skill, care, labour, and practical many-sidedness required of those who would efficiently discharge the multifarious duties required of a planter in field and factory.

At the close Mr. Christison called special attention to the fact that his lecture must have gone some way to make clear that, in addition to the inherent superior quality of Indian over Chinese tea, was its immense superiority in regard to cleanliness of preparation. He pointed out that this subject might be much elaborated and he hoped soon to have views to display the contrast more fully. The subject was alone ample for an entire lecture. Speaking of the industry generally, he (the lecturer) doubted whether the producer realised more than half the price for his teas that he did twenty-five years ago; still, in most cases, with skill and industry he was enabled to carry on showing more or less profit over an average of years. This result was due to various causes, of which he had no hesitation in naming as the two which had contributed more than any others—labour-saving machinery and the fall in exchange. There were many subjects requiring a lecture to themselves he had only been able to touch upon very briefly; many others, such as the chemistry of tea, manufacture, &c., blights, manuring, management of natives, the labour question—all of vast importance—he had never once alluded to.

One matter, though only incidentally alluded to in the few introductory remarks referred to, seems startling. It is the fact that the hill district of Kalimpong, annexed from Bhootan in 1865, is "larger than the entire Darjeeling hill territory, and though a most desirable residence for Europeans, and as suitable for European colonisation as anywhere in the Far East can possibly be, it has been reserved by Government entirely for natives, and is now largely in the possession of Nepalese, who are *aliens*, though grants of land there were persistently refused to Europeans by our Indian Government."

The chairman, Mr. John Somerville, member of the Camberwell Vestry and Board of Guardians, in moving the thanks of the meeting to Mr. Christison for his "interesting and instructive lecture," said he had learned a great deal, and had many of his vague and erroneous ideas about tea manufacture corrected. He dwelt upon the universal ignorance on the subject which he felt certain prevailed amongst the very large majority of people of this country who had been drinking tea all their lives.—*H. and C. Mail*, Jan. 24.

THE TEA MARKET

shows further improvement, and all Teas with point and character command good competition. The long spell of low prices look like giving way to a position for remainder of the season to the advantage of importers. Supplies will not be equal to the deliveries, and the corded stock is moderate. The clearances for the month exceed those of last year which were in advance of any former period.—*L. & C Express*, Jan. 24.

THE BLACKSTONE ESTATE COMPANY.

An ordinary general meeting of the Blackstone Estate Company, Limited, was held in the office of Messrs Carson & Co., the Agents and Secretaries, on 8th Feb. Mr. J. N. Campbell presided, and present were Messrs. G. J. Jameson, H. Creasy, Percy Bois and E. R. Waldock.

The CHAIRMAN proposed the adoption of

THE DIRECTORS' REPORT

which was in the following terms:—

The Directors have pleasure in submitting their Report and Accounts for the year ending 31st Dec. 1895.

The crop secured was 118,828 lb., being 1,172 lb. short of the estimate, but including 11,767 lb. derived from bought leaf represented an aggregate of 130,595 lb. Tea dealt with by the Company.

The sales realised R52,316·57, or an average of 40·10 cents per lb., while the expenditure thereon, exclusive of items under Capital Account, but including cost of bought leaf, amounted to R30,154·01, or an average of 23·11 cents per lb. The balance available for distribution to the Shareholders is R13,633·13 after providing

	R.	c.
For interest on debentures ..	2,342	99
Depreciation on building and machinery ..	3,344	73
And other items connected with the management of the Company amounting to ..	2,886	68
Total ..	8,574	40

The Directors have, in view of the bulk of the manure being recently applied, deemed it only necessary to charge one-third of the cost in the current year's accounts. From the beneficial effects of the manure on the older Tea land which may reasonably be expected during 1896, they hope the balance of such expenditure will be more than provided for by an increased yield.

The Coast Advances outstanding amount to R4,298·70, and being certified to by the Superintendent as recoverable, rank as an Asset.

The Directors recommend a dividend of 8 per cent out of the available balance profit which will absorb R10,400, carrying forward R2,500 to a Reserve Fund, and the balance R733·13 to next year's account. The debentures amounting to R40,000 commence to be repayable in 1900, but the Directors propose making provision for their redemption by an annual increase of the reserve fund proportionate to the results of the year's working.

The Superintendent estimates the yield for 1896 as 140,000 lb. Tea.

The following is an analysis of the yield of Tea for the past year, viz.:—

Acres.			lb.	
190	yielded	..	109,684	or an average, 578 lb. per acre.
52	new clearing planted 1892	..7,705 lb.		
12	do. 1893	..1,259 lb.		
			8,964	
254	yielded ..	..	118,828 lb.	Total yield of Tea.
36	planted 1894.			
290	under cultivation.			
50	forest available for Tea.			
53	uncultivated.			
393				

Of the land available it is determined to open for cultivation upwards of 25 acres this year.

At the meeting held on Saturday, the 18th January Messrs. J. N. Campbell, H. Creasy, and G. J. Jameson were re-elected to serve on the Board for the year now entered upon.

The appointment of Auditor for the current year will rest with the meeting.

Mr. BOIS seconded and the report was adopted.

Mr. WALDOCK proposed and Mr. Bois seconded that a dividend of 8 per cent be declared and paid forthwith. Resolved accordingly.

Mr. BOIS proposed that Mr. Hercules J. Scott be appointed auditor and his remuneration to be fixed at R50 for each audit.

Mr. CREASY seconded, and the motion was adopted.

The proceedings then terminated with a vote of thanks to the Chairman.

CURING COCOA.

The following "notes on curing cocoa for small settlers" are published by M. Cradwick, Superintendent of Hope Gardens, Jamaica, under the authority of the Department of Public Gardens and Plantations of that colony:—

The first important point to be observed when about to cure cocoa is that it must be quite ripe, but not over-ripe. The pods must have attained their full color whatever it may be, but if the beans shake about easily then the pod is over-ripe. The reason is that is the beans are not ripe, ths mucilaginous matter covering the beans is not properly developed into the stage when it will readily ferment. If left to get ovor-ripe, the mucilage commences to liquefy.

The best vessel in which a small cultivator can ferment cocoa is an ordinary flour barrel. To prepare this for the reception of cocoa beans, first bore about a dozen holes, each half an inch in diameter, in the bottom of the barrel then place about ten in of banana trash in the bottom of the barrel. Line the sides also thickly with trash, and have a sufficient quantity on hand to cover the beans when placed in the barrel. When the barrel is ready, break the whole of the pods and place the beans in the barrel, covering with the banana trash. The beans must be left to ferment for two days, then remove one-third of the beans and lay them in a heap on the floor and mix them thoroughly; remove the balance of the beans and mix them also, but do not put the two heaps together. After placing fresh trash in the barrel, put the beans which were at the top back into the bottom of the barrel and those which were at the bottom, place at the top. Cover with trash in the same way as before and leave for two more days, when the beans should be treated in exactly the same way as before. They should then be left for two more days, when they are to be taken out and washed thoroughly. On the day the beans are finally removed from the barrel the work should be commenced very early in the morning, so as to get all the sun possible on the first day, for the beans mildew very quickly. They should be washed immediately they are taken out of the barrel as this helps to keep them plump.

The proper amount of cocoa to ferment in one barrel is the quantity of beans obtained from 1,000 ordinary sized pods. If many more than this are put into one barrel, the fermentation is too great and the beans turn black.

If a less quantity, say below 700 pods, are to be fermented, the green trash and more of it must be used, and a weight not exceeding 28 lb. placed on the top which helps the fermentation.

When the cocoa is being dried, it is not advisable to expose it after the first two days to the extreme heat of the midday sun, it is better to take it in about 9 o'clock, and then put it out again between 3 and 4 o'clock. Those who use evaporators are warned against an excessively light temperature.

Great care must be taken when removing the spod from the trees that they be cut off with a good sharp knife, not pulled off. If pulled off, the little knob at the base of the stem of the pod is injured, and the tree will not bear from the same spot the following year. If the pods are cut off carefully, the trees goes on bearing from the same spot year after year. —June 1895.—*Sugar Journal*, Nov. 15.

A TEA ESTATE AND THE LAW OF CEYLON.

In the Chancery Division of the High Court of Justice in London yesterday, Mr. Justice Romer mentioned the case of Dickson *v.* Law, which came before him on the 20th December, and was brought by Mr. Dicksson a marine engineer, residing at Duntocher, for a declaration that Mr. Law was a trustee for him of the third part of an estate now belonging to Mr. Davidson, the third defendant, residing at Middlesborough, and which was a tea estate in the island of Ceylon. In the action Mr. Hopkinson, Q.C., appeared for the plaintiff; and Mr. Oswald, Q.C., for the defendants. His Lordship said that when he looked into this case he saw that the contract was made in Ceylon, and therefore all questions as to its validity must depend upon the law of Ceylon. It was not like the case of a contract in England, and it therefore struck him that the evidence as to the law of Ceylon was very important, far more important than Mr. Oswald seemed to have considered, and he thought it would not be right to let the evidence stand in the way it did unless they were prepared to admit that by the law of Ceylon the contract was invalid, and could not be enforced at all. He had looked at the only evidence given, and as it stood it was somewhat dubious, though he thought that was the intention of the witness who gave it. But whether that was so or not, he remembered that Mr. Oswald had tendered another witness, but did not call him, being under the impression that the witness who had given his evidence was taken at conclusive upon the point. He understood that Mr. Hopkinson was not prepared to adopt that, and if that were so the case ought to be restored to allow Mr. Oswald to call his witness, and then, if necessary, he would give Mr. Hopkinson liberty to call evidence on the subject. If he might say so, he thought the case was argued too much on the footing that it was like an ordinary case of contract here with regard to land abroad, and that the same considerations would apply.

Mr. OSWALD remarked that he argued that the contract being in Ceylon, the law of Ceylon applied.

Mr. Justice ROMER said it was a question whether it would not be the best course to dismiss the action without prejudice to the plaintiff bringing an action in Ceylon, as there was a claim for payments that had been advanced by the plaintiff. The main case, however, was that the plaintiff was entitled to get one-third of the profits of the estate. He should like to have the matter thoroughly looked into, as it would be unsatisfactory to dispose of it in its present condition, and therefore he proposed to have it restored to the paper for further evidence and argument.

Mr. OSWALD said he would prefer to have the action dismissed at once without costs.

Mr. Justice ROMER said that so far upon the merits if he could have decided in favour of the plaintiff he would have done so, and he could not help thinking that if Mr. Oswald's clients were honourable gentlemen under any circumstances they ought to return the money that was advanced.

Mr. Oswald said that an offer of a very much larger sum was made, and it was refused.

Mr. Justice ROMER had no wish to put the parties to any further expense, and he therefore asked Mr. Hopkinson if he would consent to a judgment for the amounts advanced without costs.

Mr. HOPKINSON was prepared to accept that; but till he should like to have a little time to consider it.

Later in the day Mr. HOPKINSON said that though he was himself satisfied with the evidence as it stood, it was thought it would be better if there were some discussion upon it, and therefore perhaps it would be better to restore it.

Mr. Justice ROMER thought so also, and asked counsel to mention it again to him when it was ready to be restored. He would only say at present he thought from a sense of honour the plaintiff ought to be treated liberally.

The subject then dropped.—*Scotsman*, Jan. 18th.

A NEW TEA COMPANY.—The cry is still they come. The latest company is the Rondura Valley Tea Company, which has been formed to acquire the Rondura and Broadlands estates, situated near the Ginigahetenne gap. The estates are quite young, and consist together of 350 acres of tea in bearing, and 200 acres of reserve, mostly forest. The price paid was R250,000. A new factory is to be erected on Broadlands, and, as the jat of the tea planted is high, and the soil good, the company ought to do exceedingly well at the price paid. All the capital has been subscribed, we need hardly add. Messrs. J. R. Robertson & Co. are the Secretaries, and Messrs. Henry Bois, A. E. Scovell, and Alfred Scovell, are the provisional Directors.—Local "Times."

ON TEA.

THE SECRETS OF MINCING LANE AND ITS IMMENSE TRADE.

One of the most remarkable buildings in the world is the Commercial Sale Rooms, Mincing-lane, in which it is estimated that merchandise to the value of nearly £1,000,000 changes hands every day. There are about twenty auction-rooms, each capable of accommodating between two hundred and three hundred persons; and the "items" disposed of are of such magnitude as to amaze the casual observer. For instance, the sale of 20,000 chests of tea, each containing a hundredweight, is considered quite an ordinary day's work.

It was here that the present writer met Mr. John Layton, the well-known tea expert, who has had nearly forty years' experience in Mincing-lane, and during the short chat which I had with that busy gentleman, I gleaned a good deal of interesting information concerning the tea trade.

There are now some 500,000 acres of land under tea cultivation in India, and that country, together with Java and Ceylon, produce more than two-thirds of the tea imported into the United Kingdom, which, by the way, is something like 250,000,000 lb. a year.

THE "HEATHEN CHINEE" TRADE.

Tho guileful "Chinee," it appears, is out of the running altogether, by reason of the rubbish which he has of late years considered good enough for the English market. The Rungsook Tea Estate is one of the smallest plantations, and covers only 100 acres; while that of the Assam Company is 9,068 acres in extent. The produce of every important Indian estate is brought to Calcutta and forwarded thence to the docks in London.

Dealers and merchants send a couple of men down to the tea-laden vessels and secure a number of two-ounce samples, which are subsequently paid back, because hundreds of tons of tea are annually consumed in this way.

Then comes the tea-tasting, to see which is quite as wonderful, and far more interesting, than any feat performed on the variety stage. Along polished counters twenty or thirty feet in length, rows of cups are ranged, and just behind each of these is a shallow tin canister containing the day tea, which will presently be brewed. At short intervals "standard test caddies" are placed, and on these are printed details of former price and quality, so as to guide the taster; the latter, however, usually prefers to rely entirely on his own judgment. All being ready, the weight of a sixpence in tea is placed in each cup, and boiling water poured upon it. After some little time the expert commences tasting, attended by an assistant, who has a catalogue of the day's sales.

THE TASTER AT WORK.

The assistant calls out the name and gross quantity of the tea, while the taster takes a mouthful from the cup, and after a moment's pause ejects the liquor into a large copper vessel Immediately after this the expert determines the price to a farthing which the buyer will be safe in bidding for that particular consignment.

Some tea is unhesitatingly condemned: and it is nothing short of marvellous to watch two experts going over the same samples at different times, rejecting and pricing in exactly the same manner, although the various dry and liquid teas look, taste, and smell all alike to the uninitiated. Of course the tea-taster must take care of his palate; he rarely indulges in alcoholic stimulants, smokes very little, but drinks large quantities of fresh milk.

DANGERS OF TEA-TASTING.

The greater part of his work is done in the morning, and he can get through 300 or 400 samples between nine and twelve. In time, however, he becomes extremely nervous, and a perfect martyr to chronic dyspepsia. So surprisingly expert do the Mincing Lane men become that many can actually tually name the estate upon which a certain tea was grown, after having tasted a mouthful of the cold liquor.

A deposit of £1 on every chest bid for is required by the vendors, and if the purchase is not completed within three months, the deposit money is forfeited, even though it should amount to £7,000, as in one case.

Some little time ago a parcel containing 15lb. of "fancy tea" from the Gallebodde Estate, Ceylon, was received at the sale rooms. This small quantity was the product of many acres, and consisted of very small golden tips, of which there are about six on each bush; these tips had to be gathered on strips of flannel, so minute were they, and so tedious the task of picking.

THE FINEST EVER GROWN.

The bidding for this tea, which, by the way, was exactly like fine bird's-eye tobacco, commenced at 86s per lb., and finally reached £8 10s. It was considered the finest ever grown, and a man had to walk three miles through the plantations before he could gather a single pound.

It is a noteworthy fact that many members of our aristocracy are first-rate judges of tea, yet they rarely pay more than two shillings a pound for it, whether required for private consumption or for five-o'clock reception after State Drawing Rooms. The late Duke of Marlborough, however, had a special tea imported for his own use in large quantities, for which he paid 4s 6d a pound.

Lady Hothfield is really a tea expert; so are the Duke of Connaught, Mrs. Gladstone, the Marquis of Ailsa, Lady Margaret Cecil, the Countess of Suffolk, Countess Cowley and the Countess of Portsouth.

Our greatest private tea-consumer, however, is probably the Bishop of London, who, it is averred, is supplied by one firm with no less than 300 lb. a year.—*Evening News*, January 21.

COFFEE IN GUATEMALA.

The *Bulletin de Musée Commercial* publishes an extract from a report of M. E. Capouillez, Treasurer of the Government, in which he says that coffee constitutes almost the sole article of export from Guatemala. Thus in 1894, out of a total value of 20,325,000 piastres of goods exported, the value of coffee alone reached 19,406,000 piastres. The export trade is carried on through the ports of Champerico, San José, Oco and Livingston, and the principal countries of destination are Germany (342,000 quintals in 1894), United States (130,000 quintals) and England (108,000 quintals). Coffee pays an export duty of 2 piastres, one of which is to be paid in gold (a piastre equals 5 francs). In 1894 a sum of 1,141,533 piastres was thus raised, plus 594,910 piastres in addition on the exchange on that part payable in gold, making altogether a total of 1,736,443 piastres. The exportation of coffee from Guatemala has not increased much during the past five years. Want of labor is the principal reason of this. The Indian only works when he is obliged, and experiments with Kanaka and Japanese labor have not yielded good results.—*American Grocer*, Jan. 8.

"THE PLANTER" writes:—"A private letter from a friend in the coffee region of East Africa bears unexpected testimony to the fact that the early, and seemingly incredible, trials of planters in India are now being endured with unconquerable determination by Scotsmen and Englishmen in the Dark Continent. The writer says that he never saw Europeans in a more miserable condition. Having no connection with the authorities, and being there simply to stake their lives on coffee, several Scotsmen are living in the most veritable native huts, with boards to sit on and eat off, with scarcely a change of clothing—one was actually shirtless owing to some exigence of life out there—and with nothing to read and nothing to do except to watch their coffee. Locusts come up and eat the seedlings, when the men patiently sow the field over again. More than one planter has sown his field thrice in the last season. Such men will succeed, or be followed by others who will succeed. They are the sort who have made India what it is, and who alone can carry it on as it is."—*M. Mail.*

THE ASSIMILATION OF NITROGEN BY TEA PLANTS.

Dear Sir,—Enclosed please find a contribution to your Magazine "The Indian Forester"—which I trust may be accepted. The vast subject of *cultivation* has received a deal of research from me within the last fifteen years.—Yours faithfully,

GEO. W. C. COCK.

Notes on "Assimilation of Nitrogen through the Agency of the Root Tubercles in certain Papilionaceæ."

[From the Dictionary of Economic Products Vol. V, No. 169 *a*.]

1 It is now a recognized scientific fact that certain of the Papilionaceæ (called so because their flowers resemble the wings of butterflies) have the property of absorbing nitrogen, which sets up a disease on the rootlets in the shape of small nodules. In these nodules bacteria are bred.) When ripe, the nodules burst, and the higher plants—in our case tea—have the power to feed on those bacteria so set free.

2 For the above information we are entirely indebted to Dr. Watt, C. I. E.

3 Now, our object is to make use of this information. The way we would suggest is as follows:—

Select a convenient spot near the Tea Garden, in Forest land if possible. An acre or so would do nicey. Prepare the soil as we do in makinga Tea-seed nursery. When the land is ready, sow broadcast seeds of Saw (*Albizzia Stipulata*) or Sensitive Plant (*Mimosa pudica*)' the latter appears to us to be more suitable as the rootlets are swarming with those nodules.

4 At the same time a Saw nursery should be prepared. When the trees are of a decent height they may be planted in the Tea Garden say 48 feet apart.

5 Now we come to what we consider of vital importance. The soil of the Sensitive plant nursery after a few months, should be carried away and spead around and below the Saw trees, which we have already planted in our Tea Gardens, as it will be found to be simply impregnated with nitrogen bacteria. These bacteria will fix on to the Saw tree rootlets and set up the irritation which is the cause of the disease which we see in the shape of nodules. These on becoming ripe, as we have seen before, burst and let loose bacteria which the higher plants—in our case Tea—have the property of living on.—*Indian Forester.*

MR. BLECHYNDEN'S PROGRESS.

Extract from letter, dated New York, 13th Dec. 1895, from R. Blechynden, Esq.

MRS. TIPTON.

I propose in this letter to give some details of the work being done by Mrs. Tipton, in continuation of my letter on the same subject, dated the 13th October last.

During the time the Food Show was running in the Madison Square Garden, Mrs. Tipton passed a great deal of her time there, as she had charge of the arrangements for us in the High tea-room, and used the opportunity to get into contact with the different ladies' organisations that we were desirous of utilising. During October, T. Anderson, a grocer, with a very larger number of stores opened a new one and made a particular request that Mrs. Tipton should assist on the opening night and serve tea. This she did with the assistance of a colored girl and of a man whom we dressed up in one of the Khitmagar's uniforms, to the great satisfaction of Mr. Anderson. There was a good deal of work in connection with one or two of the societies, helping them generally making tea sherbet and seeing that they looked after the tea samples we gave them to sell. The acquaintances thus formed have in some instances already proved of use, and have led to work, and others will do so hereafter. One of the results of the High teas was a tea given at The People's Tabernacle, where several of those who were present remembered the tea being served at the Fresh Air Excursions; some ten gallons of tea were served on this occasion, 23rd October.

A very large number of people were interviewed, and the managers of every one of the organisations which had days for High teas. Many of these were useless and will lead to no result while others, as I have said, have already proved fruitful.

POLITICS AND PURITY.

On Election Day (5th November), Mrs. Tipton helped at one of the Election stations in the Italian quarter of the town, where a number of the ladies connected with the Social Purity and other societies had a refreshment and tea booth in a large building. Tea and coffee were served, but the people were poor and not of the class who drink tea, being mostly Italians. Some five gallons of tea were served during the day and much of it taken by the officers, police and others at the halls. The work was done principally to get into contact with the ladies who concern themselves so much about politics, and who have, in their own way, some influence through the clubs to which they belong. Many of the ladies Mrs. Tipton met during the day and in the evening are well known by name and will be useful to us.

TEA AND MUSIC.

On the 16th November Mrs. Tipton attended a "Musicale and Tea" given for the benefit of a Christmas Tree Fund in connection with a church in Brooklyn. The reception was given in a private house and admittance was taken in the shape of a dressed doll from each of the visitors. These, I believe, were afterwards sold. The house belonging to a Mrs. Smith, at which the reception was given, is in the best resident part of Brooklyn—211 Lincoln Place. The space assigned to Mrs. Tipton and the method in which these affairs are conducted, I will describe in Mrs. Tipton's own language as the affair was typical and this one description will serve for other similar functions we have attended:—"The space assigned me for the tea was an alcove (three windows) in the music-room which was between the parlour and dining-room. These windows I draped with the Indian goods. I covered the arch with a border and draped the sides, covering completely all wood work. The tea table was covered with an embroidered cloth ("phulkrrie.") I had a small table for the packet teas to be sold from, and on this table I had a large palm. The dining-room was used for cake and candy sales, and with the folding doors open the three rooms were practically one. The tea table was very pretty, having a full tea service of silver, two high unique silver tea-pots and a sugar bowl, Dresden tea caddy and about fifty or sixty beautiful after-dinner coffee cups. The tea (which was supplied by Tetley's agent by arrangement made with him by Mrs. Tipton) arrived at three o'clock just as the first carriage drove up. We served from 3 to 6-30 p.m. fully 200 out of the 300 guests. Owing to the music and the recitations in the music-room, it left me very little opportunity to talk tea. I sold 6½ lb. in lb. packets."

AN UNPROMISING LINE,

On the 26th November Mrs. Tipon went with some ladies, who go there every year, to Blackwell's Island, where there are a number of Government institutions, including hospitals, lunatic asylums, etc. The party was made up of charitable ladies who go regularly before thanksgiving to give some of the unfortunate people confined there in the Epileptic Ward a dinner. The idea of Mrs. Tipton's going was to keep in touch with the ladies and get them to be accustomed to call upon her for services and to get at the doctors. Tea was served, but I don't think it will lead to anything.

"HELPERS OF THE HOLY SOUL."

On the 27th tea was served at the Stanton Street Mission at the request of Mr. Pearson of the United Charities and on the 30th, in accordance with arrangements made some time before, at the Waldorf Hotel, the finest hotel in the city, one of the most fashionable and "tony" in the country. A Reception and Bazaar was given by the "Helpers of the Holy Soul," a Catholic order, which was inaugurated at the Waldorf by a tea, admission being by card at a dollar a head, and, it was carried on for the three days subsequent at the Con-

vent of the "H. O. T. H. S." (I believe the full title of the Convent is "Helpers of Holy Souls in Purgatory.") The tea was made the special feature at the Waldorf, although there were the usual Bazaar nick-nacks, flowers, etc., sold, and the small sample boxes of tea were sold at the high price of 25 cents each, the usual price we have sold them being 10 cents. The table which was laid out in the best style by the Hotel people was crowded the whole evening. The Bazaar was continued at the Convent, where one room was given up to the tea and laid out with small tables and chairs, I supplied the new packages recently described and of which I sent a sample, and sent first 6 lb. which was sold at once and order taken for another 6 lb. Some difficulty was experienced at the Convent, as strangers are not allowed in the kitchen, and we had to arrange to meet this with our own gas stove.

FAIRS.

On the 19th to the 21st November there was a Fair held by the Y. W. C. A. at Ellerslie Hall in Harlem (126th street.) A small room was set apart for the tea beside the refreshment room, in which also the same tea was used. The room was hung with our Indian draperies and made to look very nice, and the tea was served by several young ladies, our own colored girl, on whom we can rely for making it properly, being behind a screen and making the tea. We got a supply of tea free from Tetley, and they also sent some packets to be sold, the proceeds to go to the fund. In all some 20 lb. was used and sold in the three days. On the same three days there was a Church Fair at St. Thomas' Church, Brooklyn. Tetley gave 10 lb of tea in half-lb. packets, and we kept a girl there on whom we could depend to make the tea, which was served by two of the young ladies in native costume. The Church choir had charge of the Grocery Counter, where the teas were served and where there was everything from a barrel of potatoes upwards for sale, all donated by different people, some by way of charity and others, like ourselves, with an eye to advertising.

On the 3rd December a Fair opened at St. Andrew's Church, Harlem. We had a colored girl to make the tea and presented 5 lb of the new ½ lb packets. But as the India-Ceylon Co. had also given tea, we did not interfere further or push the matter at all. This affairs went on from the 3rd to the 6th.

On the 4th December there was a "Birthday Party" given by the Westminster Presbyterian Church, Brooklyn, the name being given to affairs of this kind where those attending are expected to bring one cent for every year of their age. The school-room was set aside for the entertainment, and the corresponding room above it was for the tea; after the entertainment closed I gave a lecture with the aid of a professional who handled the light and lantern as I have no assistant; the charge strikes me as high, *viz.*, $12·50 for the evening. The lecture lasted just an hour and was quite successful, and some music and recitations followed. After this the whole of the company present—some 250 people—adjourned to the room upstairs, where tea was made by our own colored girl and served by three of the young ladies of the congregation dressed in native costume. I supplied six pounds of tea here in the ½ lb. packets.

A great deal of time has been given to trying to get a footing at the Jewish Fair in aid of Hebrew charities, which is now going on at the Madison Square Garden. Ever since the Food Show we have been trying to get a chance to get in here with some of the numerous Jewish ladies with whom Mrs. Tipton came in contact then. The Fair is a very important one as the Jews are powerful people here and they have organised the thing very cleverly. Yesterday, for instance, was "Military Day" and also "Authors' Day," and in addition to the uniformed Militia men, several more or less well known authors sold copies of their own works, and Melba and similar operatic and theatrical stars had booths. We struggled against some difficulties here, as Fisher of the caravan tea is a Jew and has his tea made "Kosher" (or whatever the term is for ceremonially pure) by having the head Rabbi in New York bless or purify it in some way. The lady on whom we relied for help is unfortunately ill and so we were at some loss, but Mrs. Tipton managed to get a space in the "Russian Booth," where Fisher has also his caravan tea and where we are thus brought into sharper competition with him than I would have wished had I choice. I have presented some packets of the tea and will give as much more as they can sell as the Jews are great drinkers of black teas and want the best of everything.—*Indian Planters' Gazette*, Feb. 1.

TIN TEA CHESTS.

The movement already set on foot to carry out the suggestion made by Mr. Frank Randell, of Lanelly, of superseding the present means of conveying tea in wood boxes by substituting boxes of tin has resulted in several gentlemen connected with the tinplate trade taking the matter up in a practical way. Among them Mr. G. F. Dewdney, of the Cambrian Tinplate Works, Dumballs Road, Cardiff, has taken out a patent for a tin tea-box, which is to be brought before the notice of the Tinplate Makers' Association of South Wales and Monmouthshire. The box, which is remarkable for its simplicity of construction, is made of one cross tin, and is formed of four separate plates which fit together in grooves by which means the box is made air-tight. The object of making the box to take to pieces is, of course, so that when shipped out from the place of manufacture to the tea fields it shall occupy as little space as possible. Mr. Dewdney has sent a sample of his box to Messrs. Webb & Williams, of the Hendry and Glamorgan Tinplate Works, Pontardulais, and that firm is now in communication with London firms of tea packers, who, in the course of a few days, will express an opinion as to the suitability of the box for the purpose intended. If such opinion be favourable, Mr. Dewdney will, it is said, at once commence to build additional works, for which plans are now drawn up, and the manufacture of his box will be carried on in Cardiff.—*Iron and Coal Trades Review*, Jan. 17.

CORAL STONE.

We doubt if the value of the coral deposits in the northern part of this island is fully recognized. In them our builders have a source for material that might be usefully applied to many of their purposes; and we believe that hitherto this fact has not been fully appreciated. But what we should like to be informed upon is as to why this formation should so materially differ, as we believe it to do, from any coralline formation in any other part of the island. South of Mannar island, so far as we are aware, no *solid* deposit of coral, capable, as is that north of that limit, of being cut into large slabs and blocks, is to be found. The southern coral growths are characterizable only as "stick" or "branch" coral, and are of no commercial value, save for the manufacture of lime. What is there about the northern waters that tends to cause this distinctiveness of coral formation? And, further, what can be the originating cause of the difference of structure? By some it is thought that the coral stone of the north is due to the deposit throughout long periods of the broken "stick" coral and the consolidation of its *debris* by the pressure of the relatively still waters of our northern region. It seems difficult to assign any more likely cause, but some other suggestion may offer itself to the minds of some of our correspondents. The stone of the north has long been used in many departments of building. It is admirably suited by its lightness and toughness of texture for use as arch stones, being very readily shaped by an ordinary saw. Several long arched bridges

have been built with it in the Jaffna Peninsula and have proved its great durability as a building stone. It has also been applied to ornamental uses, the dressings and Gothic windows of St. John's Church at Chundikuli having been constructed of it. Cut into slabs it has furnished the covering for nearly all the road drainage of the same locality. We cannot but think that much employment could be economically found for this stone in our southern districts, its extreme lightness favouring the cost of freightage. It would be interesting to learn what is known as to the composition of these valuable deposits, as to which we have hazarded a conjecture.

VARIOUS PLANTING NOTES.

LAND FOR SALE IN THE WYNAAD.—Virgin forest land in the Wynaad, suitable for tea cultivation, and situated at an elevation of from 3,000 to 4,000 feet, in blocks of 500 acres or more, is advertized for sale. Small blocks of 100 to 200 acres of coffee land in full bearing, adjoining forest land are also offered for sale.

TEA IN THE WYNAAD.—The Price fetched by the first break of "Eramaculla" Tea in the Home market was 9½d, not 9d as stated in the telegram from London. By the details given in Messrs. Gow, Wilson and Stanton's price-lists, to be found in our market-supplement, it will be noted that the shipment was a very representative one. These results reflect great credit on the Company's Tea Superintendent, Mr. Nicolls, who has had several years experience in Ceylon. The corrected prices, by the way, are 1½d above the week's Indian average.—*Planting Opinion*, Feb. 1.

LIBERIAN COFFEE IN PERAK.—In the Lower Perak Monthly Report tor December 1895, Mr. E. J. Brewster, District Magistrate, says:—

I have visited the various small agricultural settlements and was disappointed to find so many people had left; various reasons are given; at the same time I am glad to report that the Liberian coffee gardens, when sufficiently drained, have come on wonderfully. The Chinese who have planted a little say it pays them well now; one Malay told me he had sold over four hundred dollars-worth off his holding and was extending it, the trees look remarkably well. I hope to be able to assist the Javanese settlers a little during 1896; they have cut many drains themselves. It is people like this I like to help, who are not above doing a stroke to help themselves.

TANNING.—Mr. F. C. W. Webb, a practical tanner, curer, and leather-dyer at Dharavie, in Bombay, is credited with being the inventor of the latest process of the art of tanning, which promises to revolutionise that art, at least in India. He has applied to the Government of India for permission to patent his invention. It is claimed for this process that it entirely dispenses with the use of any chemical substances or compounds, that it will supersede all systems in vogue in India by its effecting a saving of 75 per cent of labour to the manufacturer, and of 25 per cent to the public in cost, and lastly, that it will convert raw pelt into the finest tanned leather in from 24 to 48 hours (a thing which at present, by the best processes, takes nearly as many weeks to accomplish). This is regarded as its principal merit. The advantages in the tanned material by this process in Mr. Webb's machine are said to be:—The leather will have better weight and colour, and cost 25 per cent. less; greater durability and suppleness, with equable firmness (as good as that done by the 6 and 9 months systems); and development and retention of the industry in the country.—*M. Mail*, Feb. 4.

DESICCATED COCONUTS.—We learn from London that one of the parties to the coalition in connection with this article has withdrawn, and the Syndicate may now be considered as at an end. There has been a good demand recently, and a very large forward sale has been concluded; but the rate has not transpired. Meanwhile the various desiccating works are in full swing which gives employment to a very large number of hands who would otherwise have no work to do.—Local "Examiner."

CINNAMON IN JAVA.—In the latest number of *Teysmannia* Dr. van Romburgh has a paper on cinnamon, in which he describes the methods of cultivation, distillation of oil, preparation of bark, &c. He then proceeds:—

The cinnamon tree was introduced into Java about 1828. Under the culture system it was planted on a large scale, especially in Krawang, where the cultivation of it held the longest stand, without however yielding the returns that were expected from it. The cinnamon of *C. zeylanicum* cultivated in Java is said to be not so fine as that grown in Ceylon, a fact that need not create surprise, if the statement be true, that the Ceylon cinnamon tree varies so much. The writer then mentions the existence in the Java experimental garden of trees of *Cinnamomum Cassia*, Blume, the bark of which variety is said to fetch high prices in China. After referring to oil of cassia, "Chinese cinnamon," and *Cassia lignea* and *Cassia vera*, Dr. van Romburgh concludes as follows:—

According to Dr. van Gorkom the *Cinnamomum kiamis* found in the high forests of West Java yields a bark the powder of which can serve very well as a surrogate for true cinnamon. It is not impossible, that by a rational cultivation of some of the varieties of cinnamon found growing wild a product of good quality in a form desirable in commerce may be obtained.

We have no fear that Ceylon's monopoly in the production of the finest cinnamon will be endangered by Java or any other country.

WASTE LANDS FOR TEA CULTIVATION IN INDIA.—Discussing objections made by the Indian Tea Association with regard to rules issued by Sir Charles Elliott for the grant of waste lands for tea cultivation and for regulating leases, the *Pioneer* says:—

One rule lays down that a grant of land on an individual application shall be limited to 1,500 acres, the Government view being that such an area affords sufficient scope for a garden to be worked with profit and advantage. The men who have developed the Duars and partly turned a wilderness of jungle into land yielding a handsome revenue contend that all practical experience shows the limitation to be too stringent. Cases can be cited where it has been possible to utilise for actual cultivation only one-third of the land acquired: and the area remaining to be taken up is far less promising than the older tacts, timber being sparse and the water supply scarce. It is argued that as in the past grants of 2,000, to 3,000 and even 4,000 acres have been given and, as the bigger gardens have invariably been successful, it would be a mistaken policy to lay down the strict limitation of 1,500 acres. The tendency nowadays is to amalgamate small concerns, capital being liberally provided for work on a large scale, and if capitalists are to be checked in their enterprise they will naturally turn their attention elsewhere. The Association ask that the local District Officer shall be given some discretion as to the extent of each grant, and that where very large areas are in question reference shall be made to the Board of Revenue. This seems only fair and reasonable. Again, objection is taken to a rule which apparently debars an applicant from applying again in his own name for more land until the five years of his first lease have expired. This is radically wrong, for the fact that a planter has already given hostages to fortune should not debar him from extending his holding—always provided that he can clearly establish his financial ability to open out more land,

CALCUTTA TEA TRADERS' ASSOCIATION.

Report of the Committee for the year ending 31st December 1895.

The Committee have again to report an uneventful year so far as the affairs of the Association are concerned, but they feel that this is not a matter for regret, inasmuch as it goes to prove that the tea trade of Calcutta is carried on smoothly.

A suggestion for a new rule to the effect that "Brokers should only deliver tea brought by native buyers for Bombay and elsewhere on receipt of cash," was made to the Committee in August last; but it was considered that the matter was one which might well be left to the brokers to decide for themselves, as the selling broker could always protect himself by asking for cash, should he think fit, when the delivery orders were presented.

The working of the Port Commissioners' Tea Warehouse with an improved system brought into operation, and the increased supervising staff which it was stated last year had been sanctioned, has apparently given greater satisfaction to the trade, since no complaint has reached the Committee regarding it.

The subject of thefts from consignments of tea after same have left the gardens came up for consideration in November on a representation from the Indian Tea Association. There was a very strong suspicion that thefts occurred pretty frequently whilst the teas were in transit between inland and ocean steamers and a recent successful prosecution of a boat's *manjie* and crew by the River Police for a wholesale robbery of tea will no doubt have a deterrent effect upon this class, though until the receivers of the stolen goods are prevented from carrying on their illicit trade, there will always be inducements for robberies of this kind. The Committee consider the special thanks of the Association are due to Sir John Lambert, Commissioner of Police, for the very vigorous manner in which he has dealt with the matter of the representations of the Indian Tea Association, and they are also much indebted to Superintendent Hogg for his exertions.

Claims. There has been an increase in the number of claims submitted during the past year, the number being 70 against 17 in 1891. It is noticeable that where claims appear to be just and fair, there is a growing tendency on the part of the proprietors of the gardens interested to pay them without waiting for a reference to the Committee, and this fact in a great messure explains the comparatively small percentage of claims recommended for payment from amongst those which have finally come up for disposal. The Committee would here remark that much inconvenience and delay would be saved, if Members would instruct their Agents at home to obtain fully detailed Dock certificates in support of any claims they may desire to make for loss in weight. It is obvious that were a certificate gives only the total weight of tea instead of the weight of the contents of each individual chest, no opinion as to the probable cause of the loss can be arrived at. The following comparative statement shows the number of claims dealt with during the past five years:-

Year		Total Claims	Aggregate Value. R	As	P		Average Value. R	As.	P.
1891	..	70	2,175	0	10	..	31	1	11
1892	..	16	1,561	7	4	..	31	0	0
1893	..	72	3,426	8	8	..	47	9	5
1894	..	17	1,892	2	2	..	10	1	1
1895	..	70	3,186	5	4	..	45	8	3

The claims for 1895 were distributed amongst the various classes of tea as under:—

Orange Pekee	1
Broken Orange Pekoe	8
Pekoe	9
Broken Pekoe	20
Pekoe Souchong	12
Broken Souchong	2
,, Pekoe Souchong	1
Pekoe Fannings	11
Broken Tea	3
Total	70

—*Indian Planters' Gazette*, Feb. 1.

TO GROW COFFEE IN CALIFORNIA.

Col. Charles F. Crocker is going to start a coffee plantation in the San Joaquin Valley, and if his experiment proves successful the fertile ranches thereabout will have a boom that will be without precedent. The Pacific Mail Company's steamer *San Juan*, which arrived at San Francisco recently, brought from Central America 1,000 yearling plants with which Colonel Crocker will commence his interesting venture. The plants were carefully selected by Samuel Howe, Colonel Crocker's agent, who died on board the steamer December 1, but the object for which he made the trip has been accomplished, and the collection of plants, which perhaps cost him his life, was landed here safely, and will be taken in charge by Colonel Crocker's gardener.

The coffee plants which Colonel Crocker has secured for his experimental ranch are of the hardy Arabian variety, which produce the bulk of the coffee of commerce. They are mere slips now, and are completely boxed in such a manner that they do not take up much space and might be overlooked by the casual observer. But every precaution has been taken to protect their roots from the chill atmosphere, and they are as good and fresh apparently as when taken from their native soil. Tho plants will be set out this fall most likely, but six years must elapse before they will be old enough to bear berries.

Scientists who have studied the soil and climate of tho San Joaquin Valley are some what doubtful as to whether coffee plants will thrive there. The coffee plant not only requires fertile soil and plenty of sunlight, but a certain amount of moisture, and that is where the rub comes in California.—*San Francisco Chronicle.*

DRUG REPORT.

(From the *Chemist and Druggist.*)

London, January 25th.

CROTON-SEED remains exceedingly scarce: the nomina price is about 50s per cwt for good quality, but none is offering.

GAMBOGE very steady. Eight packages sold at from £8 5s for ordinary pickings up to £10 2s 6d for good, partly blocky pipe.

VANILLA.—A fair supply of about 170 tins sold today with good competition.

NUX VOMICA.—A trifle easier. Eighty bags fair bright small Cochin seed sold without reserve, at 6s per cwt, while 57 bags sound Bombay realised 7s per cwt. A parcel of 547 bags from Madras was bought in at 4s 6d per lb.

ESSENTIAL OILS.—No transactions of any importance took place at to-day's auctions. Two cases of Cinnamon oil sold at 7d per oz, and a parcel of Cinnamon-leaf oil at 5d per oz. For 5 cases HWB Eucalyptus oil is a bid of 8d per lb was refused, and 4 cases "Dawson" brand were bought in. An 800-lb drum of Citronella was bought in at 1s 10d per lb; privately 2s 2d per lb is asked.

ARECA-NUTS.—About 6d easier; 4 bags sold today 11s 6d per cwt.

COFFEE PROSPECTS IN NYASSALAND.

Mr. G. Mortimer Crabbe, Mlanje, British Central Africa, writes to a contemporary:-

It might interest your readers to know something about the prospects of Coffee in Nyassaland. Several Ceylon planters have visited the country, some of whom have a poor idea of the country and its prospects in coffee, while others have returned with glowing accounts. There are always two sides to a question, but, if tho truth be told, the men who have the poor idea are men who have come and gone in a hurry, and who have seen little. Because our district is not quite a success, it does not follow that others are all the same. The men who have returned with favourable accounts are men who have taken the trouble to visit several districts, and who have worked out careful figures. That coffee has splendid prospects before it cannot be denied, but unfortunately the ideas of a good many local planters are strange ones: for instance, one planter who was in a hurry

to get a return from his land planted Indian corn between the rows of coffee. Another, who imagined the higher his coffee grew the more crop he would get from it, topped his coffee at 5 feet, while the general idea is to plant large acreages in as short a time as possible. It is needless to mention the result, but there are always exceptions, and the few men who have planted a small acreage carefully have something to show for their money. For instance, I know of one estate of 240 acres, of which 160 acres are in bearing, that paid 20 per cent in its 4th year, while another planter got a maiden crop of 5 cwts an acre from a 40-acre field. Labor is very cheap, and it is almost entirely paid in calico, a man earning the equivalent of 2s a month, a woman 1s 6d and a child 1s. Transport is unfortunately rather heavy; but it is only a matter of a short time before that is considerably reduced. The country is sadly in want of some good roads, as the present so-called roads are but mere tracts. To men with plenty of energy and a small amount of capital, there are good prospects in this country.

COCONUT CULTIVATION : MANURING.

(*Communicated.*)

A few months ago it was mentioned that the peasant proprietors of the Negombo district had taken to cultivating their coconut properties, stimulated thereto by the example of Mr. J. D. Vanderstraaten. If so, one contention of mine *re* the distribution of Agricultural instructors has received support and proof. I always contended that for improved cultivation to become popular it was necessary for Instructors to be moved about to demonstrate their methods and to prove their success. Mr. Vanderstraaten cannot rightly be called the apostle of the improved cultivation of coconuts, and yet his system of cultivation is said to be followed by the conservative villager. It is useful to enquire the reason for this. It is not far to seek. Its benefits and advantages have been brought home to him and stare at him on every side. As far as the high cultivation of coconut is concerned, at least in the Western Province and in the Chilaw district, Mr. David Wilson, I believe led the way. He was known as one who went in for a variety of manures, though report says he was not very discriminating in his methods. At Kannwangalla and Waljapala he had a very hard soil in places to contend with, and the cost of working it must have been considerable and the returns not commensurate with it. The earthworks on these estates are monuments of his pluck and determination. Besides the estates of Mr. Wilson, high and intelligent cultivation had been carried on on Golua Pokuna and on the estates in charge of the veteran "W. B. L." and his contemporary Mr. Carry. If their examples had not been followed and that of Mr. Vanderstraaten has been, the reason is not to be found only in the advance of intelligence, but also because their examples were isolated and that of Mr. V. scattered. For energy and pluck commend me to this gentleman. He is a worthy example to all Ceylonese especially to the younger and rising generation. He is not so much in evidence as is Mr. W. H. Wright. His example like that of the veteran should always be quoted to point a moral.

After the Report of the Superintendent, one was not surprised at Mr. Coomaraswamy's motion in Council on the School of Agriculture. But he adduced strange reasons against the institution and its teachings. Because our fathers and forefathers pursued certain methods and were satisfied with their soundness and results, therefore no change was necessary or wanted. Why this conservatism on the part of an intelligent and enlightened man only as regards agriculture? Why does he not preach and practice it in everything else? He is looked upon as one of the most progressive men amongst the Tamils. He surely does not, on his estates, follow the methods of his forefathers.

If the landed gentry of all nationalities in the island realized the benefits of intelligent cultivation and consulted their interests better, their sons would undergo a course of instruction at this school and carry out what they learnt, on their estates, instead of running after Government appointments for wages that will be scorned at by a first-class domestic. The school is a most useful institution and fills a void in a country whose industries are mainly agricultural. That it does not receive the support it deserves and occupies its present unenviable position is a serious reflection on all landed proprietors.

To the enthusiastic agriculturist there is no branch of his profession which is more fascinating than manures and manuring. Manure plays the most important part in his reaping the result of his labors. It was mentioned recently that Mr. Wright is a great believer in ashes for coconuts. Ashes are a very good manure, but should not be applied by themselves unless the soil to which they are applied has in sufficient quantity the organic matter necessary for the coconut tree. The composition of ashes varies with the substances that yield them. Some are rich in phosphoric acid, potash, lime and the other mineral matters necessary for the growth of vegetation. Others have these or some of these in comparatively small quantities, hence the disparity in the results of their application. The ashes resulting from the burning of the products of the coconut tree must of necessity be beneficial to it. I used to purchase any quantity of the ashes of husks delivered on the spot at ·06 cents the bushel. As a sandy soil is very poor in organic matter, and ashes are composed entirely of mineral matter, they are seldom applied by themselves to such soils and are most beneficial to heavy, clayey soils when dug in. Mr. Wright does not stand alone in his belief in ashes. The other gentleman, whose name is mentioned before, is known in these parts as "Alu Mahatmaya" or "ashes gentleman," as he goes scouring the village for ashes. Except under certain circumstances, I do not believe in reducing vegetable matter to ashes for application to the soil. I think it better to bury it in the soil and allow it to decompose, giving out to the soil and the vegetation it is supporting the benefit of the gases evolved during the process. I may be pardoned for saying what is doubtless known to most agriculturists, that decomposition and decay are but another and slow process of combustion. The ultimate results of both processes are the same. As I said before, it is only under certain circumstances that I think that vegetable matter should be reduced to ashes before application. I may mention a few. When a substance takes very long to decay and is too bulky for application, such, for instance, as logs of timber, which take long to decay and benefit only the place where they lie. When, owing to the nature of the soil, burying becomes too expensive an operation. On a sandy soil which is usually characterized a hungry soil, I think it of paramount importance that every scrap of vegetable matter be buried. Owing to its texture, the operation is an easy and inexpensive one; and if year by year these burials take place in different spots, the texture of the soil will be changed as well as the growth of the vegetation which it sustains. On cinnamon estates, this system of burial is the usual thing; and on an estate I know of, which in its day was one of the best kept of estates and where a burial of one year was not disturbed till perfect decomposition had taken place, the usual sand had turned to a rich mould; and well-known cacao planter on watching a hole dug exclaimed "Just the soil for cacao. So rich in vegetable matter," Coconut cultivation is admittedly more remunerative than cinnamon and its cultivation, which in the usual acceptation of the term excludes manuring, coasts very little, so that what is possible in cinnamon cultivation is doubly possible in coconut, and all vegetable matter including weeds, branches and husks especially in sand soils should be buried. Some people are æsthetic to a fault and do not like to see the soil, on their lawnlike plantation, disturbed by holes being cut in them. I always sacrifice æsthetics to expediency. The usual process of disposal of branches and husks is by burning. I have myself done this on heavy soils, and have further done what very few do, spread the ashes as far as possible and dug them in. A large surface of soil was

thus cultivated. Burning improves a heavy soil by altering its texture, and for the very same reason impoverishes a light sandy soil by burning out of it the little organic matter it has. In defiance of appearance, I used to cut and arrange the branches of the coconut tree round the stems in dry weather to act as a mulching and conserve moisture. With the first April rains, and when danger from fires has passed, I used to burn them.

B.

LIMES GROWN IN HAPUTALE.

Mr. J. A. Martensz of Macaldenia, Koslanda, writes:—"As there has been some talk lately of growing oranges and lemons &c. in Ceylon on a large scale, and that the Haputale district is likely to be most suited for such cultivation, I send you by today's tappal a small box of limes grown on this estate under ordinary circumstances. You will see that they are of fair size and weight (2¼ oz. being about the average), and that they are not thick-skinned. With better cultivation I feel sure much larger limes could be grown."—The limes are fine, large ones; and the flavour and strength of the juice are much superior to those of the lowcountry limes.

CEYLON AND INDIAN TEA IN AMERICA.

Mr. Alex. Philip at the request of the "Committee of Thirty" has forwarded to us a pictorial cutting from the *New York Herald* and an article "A Romance of Commerce," received from Mr. Wm. Mackenzie. The former is an advertisement of Lipton's tea showing an attractively got up coloured girl emerging from a tea box with a packet in one hand and "directions from the tea gardens" in the other. "The Romance of Commerce" deals with the development of the Indian and Ceylon tea industry. It is written in a "taking" fashion and is all in praise of Indian and Ceylon tea.

NEW TEA COMPANIES.

THE ANKANDE ESTATE COMPANY OF CEYLON LIMITED.

The memorandum and articles of Association of "The Ankande Estate Company of Ceylon, Limited" are published in a recent *Gazette*. The objects for which this Company is established are, among others, stated to be:—to acquire the Ankande, Glenury, and Altwood estates, situated in the Districts of Matale North and Matale East, in the Island of Ceylon and to purchase tea leaf and (or) other raw products for manufacture, manipulation, or sale. The liability of the Shareholders is limited. The capital of this Company is R100,000, divided into 1,000 shares of R100 each, with power to increase or reduce the capital. Shares have already been purchased by T Watson Hall, H Creasy, William J Robinson, Laura Louisa Mary Robson, by her attorney William J Robson, Caroline Eliza Robson, by her attorney William J Robson, John F Baker, and Norman Baker.

STINSFORD TEA COMPANY OF CEYLON, LIMITED.

The memorandum and articles of Association of the Stinsford Tea Company of Ceylon, Limited, are also published in the *Gazette*. Among the objects for which the Company is established are—to purchase or otherwise acquire the Stinsford and Ivies estates in the Kelani Valley in Ceylon, or either of them or any part or parts thereof. To purchase tea leaf and (or) others raw products for manufacture, manipulation, and sale, and to manufacture, manipulate, and sell the same. To establish and maintain in the United Kingdom, in Ceylon, or elsewhere, stores, shops, places for the sale of tea, coffee, cocoa, and other articles of food, drink, or refreshment, wholesale or retail. The liability of the Shareholders is limited. The nominal capital of the Company is R500,000 divided into 5,000 shares of one hundred rupees each (of which only three hundred thousand rupees are now called up), with power to increase or reduce the capital. Shares have already been purchased by:—Henry Bois, W Forsythe, D R Marshall, D Cameron, Walter J Smith, Wm. F Robertson Reid and J A Hunter.

GLASGOW ESTATE COMPANY, LIMITED.

The annual ordinary general meeting of the Glasgow Estate Company, Limited, was held in the registered office of the Company, Queen Street (Messrs. Whitall & Co.'s), on the 15th ult. Mr. J. G. Wardrop the CHAIRMAN presided and others present were Messrs. C. A. Leechman and G. W. Carlyon (Directors), Messrs. J. H. Starey, H. H. Capper, G. H. Alston, G. C. Walker, C. S. Warren, and by proxy Messrs. A. Thompson, W. H. G. Duncan and H. Tarrant, Mr. Wardrop was called to the chair. Notice calling the meeting having been read and minutes confirmed. The Report and accounts were adopted and a final dividend of 10 per cent was declared making 18 per cent for the year.

THE DIRECTORS' REPORT

was presented as follow:—

ACREAGE.

Tea in full bearing	..	403 acres.
Do. partial bearing	..	65 ,,
Do. not in bearing	..	141 ,,
Coffee amongst Tea (65 acres)		
Grass..	.. ..	2 ,,
Jungle, &c.	.. ..	100 ,,
Total Estate	..	714 acres.

The Directors have pleasure in submitting to the Shareholders the accounts of the Company for the past year.

The crop secured amounted to 232,239 lb. Tea and 562 bushels Coffee, against estimates of 205,000 lb. and 500 bushels respectively.

The net average price of Tea and Coffee were over 58½ cents. per lb. and R18 per bushel respectively; the prices in the previous year being 69½ cents. and R18·25.

After making the usual provision for Depreciation of Buildings and Machinery, the result of the year's working, including a small balance from 1894, is a profit of R71,086·64, equal to 21¾ per cent. on the Capital of the Company.

An interim Dividend of 8 per cent. was declared on 3rd August last, and the Directors now recommend the payment of a final Dividend of 10 per cent., making 18 per cent. for the year; and that R12,000 be added to the Extension Fund. After payment of R300 extra fees to the Directors, in terms of the Resolution passed on 18th February, 1893, a balance of R286·64 will remain to be carried forward.

The estimates for the current year are 242,000lbs. Tea and 200 bushels coffee on an expenditure on working account of R67,414·80. It is proposed to bring under cultivation during this year further 15 to 20 acres of forest land, regulating this area by the demand from neighbouring estates for timber, for fuel and building purposes. The cost of this extension, of additional machinery and buildings, &c., is estimated at R5,870.

The Directors have sanctioned the construction of a weir across the Agra river and contracted for a complete Turbine installation for Glasgow factory at an estimated cost for the whole work of R22,000. When the above are completed, the factory will have at all times an ample command of water power, thereby economizing working expenses and doing away with the necessity for a large fuel reserve.

In terms of the Articles of Association Mr. J. G. Wardrop retires by rotation from the Board, but is eligible for re-election.

Mr. A. L. Cross being about to leave the Island Mr. Megginson has resumed the visiting of the Company's properties.

The appointment of an Auditor for the current year will rest with the meeting.

By order of the Directors, WHITTALL & Co.,
Agents and Secretaries.

Colombo, 23rd Jan. 1896.

THE DIMBULA VALLEY (CEYLON) TEA COMPANY, LIMITED.

The mail has brought us a copy of the prospectus of this Company, which has been formed with a capital of £200,000, in 40,000 shares of £5 each, the present issue being £150,000, in 10,000 six per cent cumulative preference shares of £5 each.

DIRECTORS.—James Sinclair, Esq. (late of Ceylon), 22, Fitzjohn's Avenue, N.W., Chairman and Managing Director; Keith Arbuthnot, Esq. (Sanderson & Co.), 37, Mincing Lane, E.C.; W. Forbes Laurie, Esq. (late of Ceylon), High Wycombe, Bucks.; Æneas Ranald McDonell, Esq., 32, Elm Park Road S.W.; C. J. Rowe, Esq. (Rowe, White & Co.), 16 Philpot Lane, E.C.

BANKERS.—The London Joint Stock Bank, Ltd, 5, Princes Street, London, E.C.

BROKERS.—Messrs. W. I. Carr, Sons & Tod, 2, Royal Exchange Buildings, E.C.

SOLICITORS.—Messrs. Templeton & Cox, 9, King's Bench Walk, Temple, E.C.

AUDITOR.—A. N. Frewer, Esq., A.C.A., 34, Nicholas Lane, E.C.

SECRETARY AND OFFICES (*pro tem.*). B. F. White, Esq., 16, Philpot Lane, E.C.

This Company has been formed mainly with the object of acquiring, working and developing Tea Estates in Ceylon. The success of the Tea Industry in the Island, especially in the Dimbula district, and the growing favour with which the Shares in Tea Companies are regarded by investors, are so well-known that no detailed reference thereto seems necessary.

The Directors have arranged for the purchase of the following six Estates in the Dimbula district, viz., "Bearwell," "Mousa Ella," "Tillicoultry," "Belgravia," "Elgin," and "Lippakelle." These Estates comprise a total area of 2,091 acres, of which 1,835 acres are under tea, 130 acres are available for planting with tea, and the remainder is forest jungle and grass land.

The Estates are in a very efficient state of cultivation, and lie at elevations varying 4,000 to 5,800 feet above sea level. Consequently the Tea produced are of a very high class, and owing to the quality of the soil and the favourable climate, the yield averages fully 500 lb per acre on fields at full bearing. This compares well with the yield of Estates at lower elevations, with the advantage of a much higher price for the produce. The factories are equipped with modern machinery, the bungalows and lines are in good repair, and labour is plentiful. The conditions of transport are good, as Government roads connect the Estates with the railway. There are native bazaars on Tillicoultry and Belgravia, which are a source of revenue. Mr. James Sinclair, the Chairman and Managing Director of the Company, is the Vendor of "Bearwell," "Mousa Ella," "Belgravia" and "Elgin." and the price fixed by him for these 4 estates is

him for these 4 estates is ..	£93,500
The price fixed by the Vendors of "Tillicoultry" is	30,000
The price of "Lippakelle" purchased at public auction (including commission) is	21,700
Total for the 6 Estates	£145,200
Leaving for the general purposes of the Company	4,800
	£150,000

Taking the value of the bazaars at £4,000 (10 years' purchase of the present revenue), and of the land not planted with Tea, nearly half of which is bearing Coffee, at £5,120 (£20 per acre), the purchase price of the area planted with Tea works out at about 8 years' purchase of the estimated net revenue which the Directors consider a moderate rate.

The production for the current season of the Six Estates is estimated at not less than 800,000 lb. Tea which with the coffee crop may be expected to yield a net revenue of £16,500. Deducting therefrom the Preference Dividend of £3,000 there would remain the sum of £13,500, equal to 13½ per cent. on the amount of the issue of Ordinary Capital. Moreover, as some of the tea planted on the Estates now acquired is not in full bearing, and 130 acres of land have yet to be planted, the out-turn should, therefore, for some years be progressive.

The shares were fully subscribed for, we hear on, the very first day of publication. 29th January.

DUNKELD ESTATE COMPANY, LIMITED.

The annual ordinary general meeting of this Company was held in the office of Messrs. Whittall & Co., the agents and secretaries, on the 15th ult.

There were present :—Messrs. C. A. Leechman (in the chair) and G. W. Carlyon, Directors ; Mr. W. H. G. Duncan by his Attorney Mr. G. W. Carlyon, Messrs. C. J. Donald and G. J. Jameson.

THE DIRECTORS' REPORT.

was in the following terms:—

ACREAGE.

Tea in full bearing	- 383	acres
Jungle, &c. -	- 53	,,
Total Estate -	- 436	acres

The Directors have pleasure in submitting to the Shareholders the accounts of the Company for the past year.

The crop secured amounted to 157,737 lb. tea, being 32,737 lb. over the estimate, and 54,220 lb. more than the yield in 1894. The net average sale price was about 51 cents per lb., as against 57 cents in the previous year; whilst the cost per pound laid down in Colombo was 29 cents.

The net profit for the year, after making ample provision for depreciation of buildings and machinery, and including a small balance for 1894, amounts to R29,652·65. or 19¾ per cent. on the Capital of the Company.

An interim divident of 9 per cent was declared on 3rd August last, absorbing R13,500, thus leaving a balance of R16,152·65 now to be dealt with.

The Directors recommend the payment of a final dividend of 10 per cent, making 19 per cent for the year; and that after payment of R400, additional fees to the Directors in terms of the Resolution passed on 18th February, 1893, the balance of R752·65 be carried forward to the new year.

The crop for this year is estimated at 150,000 lb. tea, on an expenditure of R41,510.

In terms of the Articles of Association, Mr. Chas. Young retires by rotation from the office of Director, but is eligible for re-election.

The appointment of an Auditor for the current year will rest with the meeting.

By order of the Directors, WHITTALL & Co.,
Agent and Secretaries.

Colombo, 24th January, 1896.

The report and accounts were adopted and a final dividend of 10 per cent was declared making 19 per cent for the year.

THE NORTHERN DISTRICTS CROP ESTIMATE FOR 1896.—We are indebted to Mr. R. N. Anley of Malvern estate, Wattegama, Secretary of the Northern Districts Planters' Association, for the following figures, showing the tea crop estimate for the district for 1896, which was inadvertently omitted from the annual report recently submitted to a meeting of the Association:—

Hunasgiriya	..	1,136 acres	Crop	515,000 lb.
Elkaduwa	..	1,852 acres	,,	700,000 ,,
Matale East	..	5,935 acres	,,	2,277,000 ,,
Pauwila	..	1,625 acres	,,	665,000 ,,
Total	..	10,548		4,157,000 lb.

PLANTING AND PRODUCE.

RUSSIA AND THE IMPORT OF GREEN TEAS.—The Russian Minister of Finance has published a supplementary order permitting the import of green teas into Bokhara and Transcaspia over the Persian and Afghan frontiers, and by transit through Batoum, Baku, and Uzunata, irrespective of origin, according to the tariffs of July 18th and August 24th, 1894. The tariff of July 18th, establishing duties of 14 roubles 50 kopes, and six roubles paper per pood of 36 lb. according to the quality, is extended to tea imported through the custom houses of Irkeshtan, Naryn, and Issik Kul.

JAPAN AND TEA MACHINERY.—It has been hinted that the Japanese are anxious to improve their tea manufacture by the adoption of machinery. This may be so, but we do not think any British engineers will send tea machinery to Japan at present. Japan has refused to enter into patent and trade mark treaties. The explanation of her policy, as given by the chief examiner in the Japanese Patent Office, is as follows: Europe and the United States do not recognise Japan as a civilised nation. Our laws are not good enough for them, so they refuse to submit their subjects to the jurisdiction of our courts. They have also forbidden us to make our own tariff, in not allowing us to impose a duty of more than 5 per cent upon imported merchandise. How can they blame us, then, for being unwilling to make a treaty to protect their patents? Under the new treaties, which take effect in 1899, Japan becomes a member of the International Patents and Trade Marks Union, and will afford to foreign inventions the same protection as to her own.

COFFEE PLANTING ON THE HAWAIIAN ISLANDS.—In a report which has been made to the Executive and Advisory Council of the Republic of Hawaii by an American labour commission relative to coffee planting the experiences of Ceylon coffee planters are turned to account and a comparison instituted. For facts and figures the commissioners refer to Ceylon, and the report goes on to state: "In 1875 the official returns of the island of Ceylon showed that 204,000 acres of land were under coffee, and that 200,000 labourers were required in the cultivation; that is to say, about one labourer to the acre. With the better class of labour and improved methods in Hawaii, it is believed that one man can cultivate three, or in some cases even five, acres. But in the picking season there will probably be needed about one person to the acre. Women and children would supply this need to some extent, if men with families could be induced to immigrate and settle in the islands. If there should be within the next few years 20,000 acres of land under coffee cultivation in Hawaii alone, there would be needed in the picking season, according to the above estimate, nearly 20,000 labourers, including women and children. Regarding the coffee industry as a source of Government revenue, it is stated that in the island of Ceylon the coffee plants have, when in full bearing, for some purposes, the value of 1 dol. a tree. It seems that the same valuation may be justly placed on the plants in Hawaii if the planters meet with anything like the success they expect. The demand for labourers on the coffee plantations is now readily supplied by the Japanese whose contracts with the sugar planters have expired. This demand is as yet limited, but it is evident that with the present rate of increase in acreage there must inevitably develop a competition for labour between the sugar and coffee planters which may prove disastrous to both, or may result in the irreparable losses experienced in Demerara and the Straits Settlements.

LAGOS INDIARUBBER.—The newly-established export of indiarubber from Lagos continues to make rapid progress. In 1893 this trade was all but unknown, and in 1894 the total imports from the colony were only 76,272 lb., valued at £5,995. We learn, however, by the latest mail advices that during October, 1895, alone the quantity shipped was 1,059,158 lb., and the value £57,117, or at the rate of £685,404 per annum. Indeed, it is probable that next to Brazil Lagos has now become the chief source of supply of raw indiarubber. The addition of this new branch of commerce to the trade of the colony may be expected to increase still further the already expanding revenue of the Colonial Government. The official report for 1894, just published, shows that the total receipts for that year were £137,017, against £115,317 in 1893 and £68,421 in 1892. The actual expenditure in 1894 was £125,829, leaving a surplus of £11,188. The projected railway to Abbeokuta and Yoruba, the first portion of which will shortly be taken in hand, may be expected to give an additional stimulus to the trade of Lagos by reducing the cost and the period of transport of produce outward and of imports inward.—*H. & C. Mail*, Jan. 31.

TEA IN AMERICA.

There has been some speculative buying, and also something done in advocacy of a duty on tea, which, we believe, would be a good thing. But in view of the fact that the Presidential election is to take place this year, it is very improbable that Congress would dare put a duty on any of the necessaries of life. Besides, it is almost impossible to get the two Houses of Congress to unite on any measure, owing to the political complexion of the Senate. This market—or, rather, this country—is obliged to take nearly all of the green teas of China. The result is, we have phenomenally low prices, Hyson selling as low as 5c per pound and first Young Hyson at 18@19c. Formosa Oolongs of high grade are well held, with the lower grades easy. There is also a firmer market for low grade Japans, while other grades are barely steady. The general market is dull. Today at noon the Montgomery Auction and Commission Company will sell 10,122 packages, viz: 1,005 half-chests Moyume; 3,083 half-chests and boxes Pingsuey; 27 half-chests Japan; 836 half-chests and boxes Congou; 146 packages India, Java and Ceylon 50 boxes Capers; 354 half-chests Foochow; 2,505 half-chests and boxes Formosa, new season's.—*American Grocer*, Jan. 15.

MARKET FOR TEA SHARES.

THURSDAY EVENING, Jan. 30, 1896.

Owing, we believe, in a great measure to public attention being recently diverted to these shares in the public prints, more especially in our daily contemporary the *Financial Times*, there has been a very considerable buying of all the better known shares within the past week, and more than one advance is notified in the official list.

FRESH ISSUES.—The Dimbula Valley (Ceylon) Company offers the greater part of £150,000 to the public this week, one-third being 6 per cent cumulative Preference and the remainder Ordinary shares, all of £5 each. We learn that the former have been applied for six or seven times, over and the latter about twice over, and that the Prefs. are now quoted at a substantial premium, say from 10s to 15s.

MINCING LANE has again hardened this week, with some very high prices paying for the finest Teas, and with also an improving tendency for the medium grades as well.

CEYLON SHARES.—C. T. P. Co.'s Ordinary do not show any business, but the Prefs. after changing hands at 16¼ came on for sale, and finished at 16 5-16 for a fair number.

Eastern Produce and Estates Company's £5 shares are said to have again found buyers at 4½.

Lanka Plantations, after being, we understand, as high as nearly £6, came on for sale at 5¼, at which, however,, a few shares were taken.

The Dimbula Valley (New) Company has been alluded to above under the heading of "Fresh Issues."—*H. and C. Mail*, Jan. 31.

PLANTING PRODUCTS.

(From the Forty-second Annual Report of the Ceylon Planters' Association, held 17th Feb. 1896.)

TEA.

The season has been a favourable one generally, most estimates having been exceeded. The average price for the year in London was the same as last year about 8½d per lb. with a lower average rate of exchange than ruled in 1894 The total Export for the year was 98,581,060¾ lb. as against 85,376,322½ lb. in 1894 or an increase of over 13 millions. The Colombo Tea Sales reached a total of about twenty millions or an increase of about 4½ million lb. over 1894. The Home consumption of British grown tea shows the very satisfactory increase of nearly seven million lb. being a consumption of 5·65 lb. per head as against 5·52 lb. in 1894. Foreign markets show steady, although slow development. And whilst you are to be congratulated on the progress made abroad, your Committee would urge on you to in no way relax, but to increase, if possible your efforts to push your staple in all foreign markets, more especially in Russia and America. In this latter country your special Commissioner, Mr. W. Mackenzie, has set to work with the energy you expected of him, and he deserves your thanks. In Russia also Mr. Rogivue has made considerable progress, and has established a certain and, it is hoped, an increasing business, sufficient to encourage others to follow his example there. Local Companies have in nearly every instance declared high dividends. The year has not only seen a large increase in local Companies, but also the formation of many sterling Companies, and the purchase of some Estates by London Companies, at the highest figures yet given for tea in Ceylon, thus proving the estimation in which your staple is held at home. Extension has been steady in a small way during the year. The demand for seed has been very considerable more especially during the latter quarter showing that in some districts large extensions are to be made during 1896-97. Labour generally has been sufficient and Sinhalese labour now comes forward, as a matter of course, during the busy months March-June in all districts adjacent to the villages. There is also a considerable increase in the resident Sinhalese labour force on estates.

COCOA.

The South-West Monsoon was late in 1895 and this retarded the blossoms so that little of the Autumn Crop had been picked by the end of the year. The crops for the last three years are 1893 cwt. 29,775; 1894, cwt. 22.791; 1895, cwt. 27,522-3-20. From these figures it might be argued that the crop of 1896 will be a small one, but the probability is that it will be larger than the one just gathered. The area under Cocoa is about 18,000 acres of which some 6,000 acres have been planted since the beginning of 1891, and were therefore hardly in bearing for the crop of last year. To arrive at the probable yield per acre a further allowance must be made for Cocoa planted with other products, so that it is probably well within the mark to say that the crops of the last three years have been picked off 12,000 acres giving average annual crops of about 2¼ cwts. per acre. A great deal of cocoa has been planted in very old coffee land, which means that the average annual yield per acre of cocoa planted in jungle soil, is very much above what these figures indicate. The prices for cocoa have continued low, and the stocks have not been much reduced.

COFFEE.

There has been a remarkable increase in the crop for 1895, as shown by the total exports of coffee. This is undoubtedly due to the exceedingly favorable blossoming season in several districts still maintaining Arabian coffee and points to no increase in the acreage, except in the case of Liberian coffee, which is being slowly extended in the lowcountry districts suitable for its cultivation,

CARDAMOMS.

The export of this product has been fully maintained in 1895, or rather slightly increased. Its extension on any considerable scale cannot however be looked for, but it is a valuable adjunct to tea properties which have land suited to its growth, as it enables the owner to get a good profit from his forest reserve while also conserving his fuel supply. As good and medium crops seem to come in alternate years this year's crop may be taken as an average one in a good year.

TOTAL EXPORTS.

By the courtesy of the Hon. the Principal Collector of Customs your Committee appends the following interesting tables for your information.

Statement showing the total exports during the years ended 31st December 1894 and 31st December 1895 from the Island of Ceylon of the following articles :—

Articles.		Quantity 1894.		Quantity 1895.
Arecanuts	cwt	120,269-1-25	cwt	99,113-0-23
Coffee Liberian	,,	790-2-04	,,	759-1-10
,, Native	,,	1,567-2-16	,,	6,076-0-21
,, Plantation	,,	29,629-0-03½	,,	59,781-2-0
Cinchona	lb	2,529,261	lb	919,820
Cacoa	cwt	22,791-3-11½	cwt	27,522-3-20
Cardamoms	lb	316,863	lb	135,090½
Coconuts	No	8,747,370	No	11,532,373 & 1,072 pk.
Cotton	cwt	1,557-1-16	cwt	2,030-2-7
Pepper	,,	142,3-22	,,	237.2-0
Tea	lb	85,376,322½	lb	98,581 060¾
Tobacco Unmanufactured	cwt	54,850-0-27	cwt	53,210-3-8
Manufactured Tobacco and Cigars	lb	480 14 oz	lb	132

Statement of Exports of Tea from the Island of Ceylon to the United Kingdom, and to other markets in 1891, 1892, 1893; 1894, and 1895 :—

Countries	1891 lb.	1892 lb.	1893 lb.	1894 lb.	1895 lb.
United Kingdom	62693676¾	65824822½	73355840½	76434117½	86641427¾
Aden	3360	5610	4155	9818	13254
Australia	3085932½	[illegible]	6816410	6952098½	9109592½
British India	573241	810788	1036365	952729	826905
Cape of Good Hope	33251	8030	20482	13608	24594
Cyprus	2800	5400	4150	4600	2200
Gibraltar	24215	41355	34025	38370	41237
Hongkong	123527	79829	149176	135299	218473
Malta	16920	21745	33895	51655	75265
Mauritius	49572	81202	86126¾	92392	168285
New Zealand	00	00	150137	266739	283149
Straits Settlements	12069	12568	29301	31106	47849
Canada	00	00	00	22858	14775
Africa	00 9348	00 11631	14850 00	16490	00 38221
Arabia	3669	2870	4641	2020	4005
Argentine Republic	00	60	1580	60	00
Austria	5366	3444	8972	1576	7539
Belgium	20	450	4231	1999	8367
Buenos Ayres	3125	00	00	00	2250
Bushire	3784	420	00	00	00
Brazil	00	10	00	00	2150
China	30455	21480	18471	4098	64925
Denmark	00	00	1270	2400	00
Dutch Indies	40	20	70	22	192
Egypt	[illegible]	88006	17723	17171	763023¼
France	[illegible]	8691	25004	29388	57882
French Indies	10	00	150	116	634
Germany	109653	190752½	215465	170696½	295444½
Greece	44	954	1935	2660	2850
Holland	00	783	5353	100	3152¾
Italy	12568	9503½	5986	3125	15263
Jamacia	1480	00	00	00	00
Japan	262	1520	1055	1790	2435
Maldive Islands	78	179	201	168	140
Jeddah	167	00	00	00	00
Manilla	250⅔	150	00	00	00
Mombassa	725	00	00	00	00
Portuguese Possessions in India	200	200	00	00	00
Norway	00	00	100	500	00
Persia	00	00	1092	60	140
Portugal	00	00	00	15	
Phillippine Islands	00	00	240	164	989
Russia	11240	505	43092	42234	336049

Countries	1891	1892	1893	1894	1895
	lb.	lb.	lb,	lb.	lb.
Russian Possessions in China	00	150	60	20	
Samoa	400	00	00	00	00
Seychelles	56	00	00	00	00
Spain	600	35	20	15020	65
Sweden	2589	770	4790	500	5525
Turkey in Europe	5769	1950	2915	3100	3150
Turkey in Asia	00	00	1480	2110	3761
United States of America	154219	85120	167691	46873	182622½
Syria	00	00	269½	0	00
West India Islands	00	609	00	1500	00
Total lb.	67020084½	72282524¾	82209352¾	85376322½	95581060¼

OFFICIAL ESTIMATE OF THE TEA CROP FOR 1896.

Your Committee. after due consideration, has decided to estimato the Tea Crop of the Island available for export in 1896 at 101,000,000 lb.

REPORT OF "THE THIRTY COMMITTEE"

CEYLON TEA IN AMERICA.

This being the first Report by the "Thirty Committee", it is desirable to begin at the point which had been reached in the last report on the subject by the Committee of the Planters' Association (*vide* Book of Proceedings for year ending 17th February, 1895) viz. the appointment of Mr. Wm. Mackenzie and Sir G. H. D. Elphinstone as representatives from Ceylon to the United States mainly on a mission of enquiry in the first place. It was found with regret that Sir G. H. D. Elphinstone could place so little of his time at the disposal of the Committee as to render it in their opinion undesirable that he should go. Mr. Mackenzie accordingly took up the work independently and has since carried it on alone. Mr. Mackenzie's chief duty on the occasion of his first visit was to find out those methods which were according to his judgment formed on the spot most suitable and most likely to further the consumption of Ceylon Tea in the United States and to ascertain who were the proper people to assist and to interest in our staple. He proceeded to America in February 1895 and returned in April 1895 to London, and his views are embodied in his letter to the Committee of 8th April 1895 which will be printed with the Proceedings for the past year. The salient points of his report are briefly (1) that as Americans drink green teas we should endeavour to make these (2) that the trade is deeply bound up in China and Japan teas which are so totally different in make and taste to ours that we will have to revolutionise the trade; (3) that even if the retailer makes as much profit per pound of our teas as he did from Chinas and Japans, yet he sells fewer pounds of ours because ours are so much stronger and therefore go further; (4) that our breaks are so small that dealers are often unable to match them whereas he has no difficulty in repeating a line of 500 at 1,000 chests of Chinas or Japans; (5) that methods of advertising as practised in England are unsuitable; (6) that the object should be to enlist in our cause men of capital and energy who are willing to take up our tea and push it and who will in time force the large dealers in the present tea trade to take our tea up in self-defence to assist such men by advertising and other ways and by further general advertising so far as funds permit. Pure food shows and other similar small exhibitions are approved of, but expensive exhibits at large exhibitions are viewed with little favour by Mr. Mackenzie. In accordance with the advice tendered by Mr. Mackenzie which is summarised above, a letter of instructions was issued by the Committee to Mr. Mackenzie, with the approval of the Government. Following the lines indicated, and indeed may be summed up in the word "advertise" though not in the limited sense usually understood as press advertisements. Under advertising the Committee included every form of making known our teas to the American trade and American consumer, so far as our funds would permit. Mr. Mackenzie was re-appointed the Ceylon representative and returned to the States as soon as funds were remitted to him. At this time a renewed attempt was made through the Ceylon Association in London to bring about combined action with India. But the proposal made failed to meet with the Committee's approval and it was considered that Mr. Mackenzie's Letter of Instructions gave him sufficient scope to unite with India if in his opinion such a line of action was desirable in the interests of Ceylon. Since then it is satisfactory to know that Mr. Mackenzie has seen his way to join forces with India to a considerable extent, as anything like opposition to Indian tea might be prejudicial to the interests of both countries and it is hoped that the Indian Committee will continue to supply funds in the same proportion as Ceylon. A number of firms who are well established in the present trade and whose organisation is thus made available to push the new article have had assistance in advertising and some firms who have taken up our teas from the first and have put energy and capital into the business of pure Ceylon Tea have also received assistance. In addition to this. however, a great deal of advertising has been done in the press, regularly by contract, and specially on occasions of political or other excitement when an event of the moment was seized and adapted by Mr. Mackenzie to his purpose as for example the yacht race, the eclipse, the defeat of "Tammany Hall" and so on. In these special cases the advertisements were pictorial and of large size. At present an advertisment is running containing the names and addresses of all grocers and others who deal in our teas in New York and Brooklyn.

In addition to these advertisements proper, a large number of what are called "reading notices" have been inserted in daily papers and articles in magazines and all are changed at intervals. The cost of advertising in America is very great and the Committee wish to warn members of the Association of this in case they should think that with the funds at their disposal a great deal more can be done. Pamphlets and leaflets have also been largely distributed. The above is a brief outline of what Mr. Mackenzie and the Committee have been doing during the year. Obviously in a matter of this nature it is impossible to publish the names of firms and others who have assisted in pushing our teas and who have in turn received assistance in advertising, but the Committee consider that in Canada, Ceylon tea is now a household word and that it is becoming rapidly known in the Eastern States and Chicago, which are after all the great centres of dense population and they point with confidence to the figures of exports of Ceylon tea from London and from Ceylon direct to the United States and Canada. Nor must these figures be looked at merely in the aggregate. The rate of increase is after all the true test and the Committee venture to think that looked at in that light they are eminently satisfactory and prove that the efforts put forth in 1894 and 1895 have met with adequate reward. In this connection it may be pointed out that the Board of Trade returns of exports from Great Britain of Ceylon Tea were only made available in 1895 at the instance of the Planters' Association and are not available for previous years. The absolute necessity of maintaining and increasing our efforts during 1896 must be apparent to all in view of our increasing exports and the Committee express their earnest hope that these efforts will be still further increased in tho future. To Mr. Mackenzie thanks are very specially due for he has thrown himself into his work with all his energy at considerable personal inconvenience. The Committee also desire to express their thanks to the Ceylon Government for its continued sympathetic attitude and its willing consent to the Committee's proposals.

CEYLON TEA IN RUSSIA.

The Committee have continued to give attention to this market, which cannot be considered any less important than the American market. Being already a black tea consuming people their change from China tea to Ceylon Tea may be expected

to be to a great extent a matter of price and more easy of accomplishment than in the case of America. The fact of Russia being a country with a foreign language and having many governmental restrictions renders it impossible for the Committee to extend their operations in the same way as is possible in an English-speaking country less fettered by trade restrictions. The Committee have accordingly continued their support to Mr. Rogivue who has in the past shown himself thoroughly deserving of assistance, and they are glad to think that that gentleman's efforts have not only resulted in his building up a good business in Ceylon teas for himself, but have also forced other large dealers in China teas to take up Ceylon teas and to stock them. This is undoubtedly the most effective method to adopt either in Russia or America and the larger Mr. Rogivue's business grows the better will it be for Ceylon tea and the more will other firms see that they must have it. It is right that Mr. Rogivue should continue to have assistance for he has for several years past proved himself a capable and straightforward man of business devoting himself to the sale of Ceylon tea through a good deal of opposition and hardship and if he has succeeded for himself, his success means success to the Ceylon tea interest. The Committee are glad to hear that he has at last established a good business for himself, and thanks him for his past services in aid of Ceylon tea.

ABSTRACT OF THE CEYLON TEA (NEW MARKETS) FUND ACCOUNT AS FROM AUGUST 1894 TO 30TH JUNE 1895.

Dr.

To Thomas North Christie	23-69
,, Cheque Book	2-50
,, Ceylon Tea Company Limited ..	8,087-93
,, H. W. Cave & Co.	59-75
,, Ceylon Tea in America (Telegrams a c) ..	109-34
,, Ceylon Tea in Switzerland ..	170-00
,, A. M. & J. Ferguson ..	111-00
,, Julius & Creasy	173-76
,, Wm. Mackenzie £924-3-1 ..	1[illegible],904-67
,, National Bank of India, Limited	119,530-18
,, A. Philip & Co.	2,000-00
,, Peons' services	160-00
,, Postages, Petties and Sundry disbursements ..	279-30
,, Petty Cash	60-70
,, Secretary	500-00
,, Skeen & Co.	23-00
,, Whittall & Co.	29-02
	R148,224-85

Cr.

By Ceylon Tea (New Markets) Fund ..	142,874-61
,, Ceylon Tea Fund	4,673-01
,, Interest	677-17
E. & O. E.	R148,224-85

ABSTRACT OF THE CEYLON TEA (NEW MARKETS) FUND ACCOUNT AS FROM 1ST JULY TO 31ST DEC. 1895.

Dr

To Albion Press	112-00
,, Book of proceedings	474-78
,, Charges Account (Bank Commission on small cheque) ..	0-50
,, Ceylon Tea in Russia ..	4,385-14
,, Ceylon Tea in Transvaal ..	116-59
,, Ceylon Association in London ..	522-45
,, Ceylon Tea in America ..	53-44
,, Capper & Sons	308-75
,, National Bank of India Limited ..	162,545-00
,, Wm. Mackenzie .. £2,552-4-5 --	45,203-30
,, Miscellaneous Account ..	375-00
,, To A. Philip & Co.	1,000-00
,, Postages, Petties and Sundry Disbursements	258-64
,, Petty Cash	115-06
,, To Secretary	500-00
,, Stationery Account	142-34
	R216,292-99

Cr.

By Balance in National Bank of India, Limited, as per previous statement ..	119,530-18
,, Balance in Petty Cash as per previous statement	60-70
,, Ceylon Tea (New Markets) Fund	94,311-13
,, Ceylon Tea Fund	940-08
,, Interest	1,450-90
	R216,292-99

E. & O. E.

A POSSIBLE INDUSTRY.

The *Asian* suggests that the Indian people might profitably take up the farming of crocodiles as a new industry. For the skin of the crocodile there seems to be a large and profitable demand; and the teeth also command a price, though for what purpose does not appear. Alligator farming and artificial breeding have long existed in Florida, U.S.A., and the magnitude of the industry may be understood from the fact that between 1880 and 1894 as many as two and a half millions of alligators were killed. But the Florida trade has overreached itself and the American alligator is growing scarce. It is this fact that suggests possibilities for India. There is all around the Bay of Bengal a stock of crocodiles, for all practical purposes quite as valuable as alligators. With this stock ready made at hand, and with at least the nucleus of a native staff versed in the habits and manners of crocodiles in the plucky crocodile fishers or hunters of Dacca, there really seems no reason why Eastern enterprise should not find its opportunity in Western losses. It will be conceded that there is something attractive about crocodile farming, apart from the lurking possibilities of fortune to be made out of a brisk demand for hides. There would be no lack of excitement in tending the stock, and as the business would have to be conducted on somewhat irregular lines, the killing would be more in the nature of sport than slaughter. It would hardly pay to raise crocodiles from the egg, as the reptiles take as much as forty years to reach maturity, and are not supposed to attain their full size until 70 years old or more. But the adult supply is practically unlimited and the rough curing necessary to prevent deterioration of the skins on the voyage could be done by the native on the spot. In the Government reward the native has already a mild stimulus to slay the "mugger," and this tends to smooth the way of the dealer in skins who would thus enjoy the benefits of what would practically be a bounty on exports.—*Pioneer*, Feb. 11.

WYNAAD PLANTERS' ASSOCIATION.

From the proceedings of the annual general meeting held on January 22nd (Mr. Walker in the chair) we extract as follows:—

ANNUAL REPORT.

The most important business before the meeting was the drawing up of an address to the Viceroy, representing our two standing grievances, *i.e.* the amendment of the Labour Contract Act and of the Prevention of Coffee Stealing Act. The address has now been presented and was most graciously received by the Viceroy; and I think that we may take it for granted from the promise given by the Viceroy that a commission will be appointed at once to enquire into the whole question. This, if it takes place, will be the greatest concession that has ever been granted to the planters of Southern India, and it remains for us to make the most of it. As there will probably be only

one planter on the commission, it is of the utmost importance that we should be represented by a good man—a man, who can realise and understand the Government of India's and the English Lawyer's views of the question as well as our own, who has the advantages that we possess under the present Act and the disabilities that we suffer from at his fingers' ends, and who realises that as advances are to us an unfortunate, but absolute, necessity, we require a law which will protect these advances by deterring from fraud while inflicting the minimum of punishment. It will remain for us at this meeting to nominate a planter as a possible candidate to fill this important place.

COFFEE STEALING.—We can again record our satisfaction at the extraordinary immunity from theft which we have again experienced during the present season. Small drying grounds covered with cherry coffee along the roadsides and in the bazaars are no longer to be seen. This is due not to any amendment of the Act, but to the wonderful energy of our Police Superintendent, Mr. Fawcett. By his preventive measures and by the zeal with which he inspires those under him, the trade of receiving stolen coffee has at last received a rude check. But we must not congratulate ourselves too much upon it because after all it is only a check, and without the amendment of Sec. 9 of the Act it will be difficult to strike an effectual blow at the trade of dealing in stolen parchment or cherry coffee.

GENERAL PROSPECTS.—I said in my last annual report, that the coming years would be most important ones in the annals of Wynaad; this prophecy is now being fulfilled. The tea industry is developing slowly, but steadily. The results of the sales of the first shipment of tea have just been received and give an average of 9¼d to 9½d per lb., which, though not so good as Assam, and not so good as we were led to expect from valuation of samples, still leaves the ample margin of at least 4d per lb. profit which, in conjunction with the fact that the yields of the young acreages have been abnormally larger should lead to the more rapid planting up of land. We have lately seen a great deal written in the papers about our Wynaad and all in praise of it, with the exception of what appeared in the columns of a paper purporting to be written by planters for planters, and we may trust that this is merely the friendly rivalry of brother planters less favorably situated. At any rate the district has lately been visited by enterprising planters from Ceylon, many of whom, I am glad to hear, are going to settle here. But I sincerely trust that the advantages of the situation will not be left entirely with them, and that the scheme so often advocated by this Association of small acreage under different proprietors, with central factories, may at last be put into force, and that the old residents may share with new-comers in the prosperity that is to come. Anyhow those of us who are fortunate enough to hold reserves of land may congratulate themselves on its greatly increased value.

Arabian coffee, notwithstanding the continued ravages of leaf disease, continues to give handsome profits in certain parts of the district, and it remains to be seen what will result from the large acreages of Liberian which will shortly come into bearing.

In conclusion, gentlemen, I beg to lay the accounts on the table and my resignation in your hands. It is with very true and genuine regret that I resign this office which I have now held off and on for ten years, and I thank you all most sincerely for the friendly support and sympathy which you have always accorded to me and without which my work would have been a toil to myself and of no avail to the district.

The report was cordially approved and adopted unanimously.

FINANCE.—The accounts for the past year were laid on the table and passed. As these showed a considerable deficit a subscription was raised in the room to meet it, and it was resolved that the yearly subscription of members be raised from R12 to R18 per annum.

COFFEE ROBBERY REWARD FUND.—As the balance at credit of this fund is nearly exhausted it was resolved that the accounts be printed and circulated and fresh subscriptions invited.

HONORARY SECRETARY.—The Chairman proposed a cordial vote of thanks to the Hon. Mr. G. Romilly for his services, both as Planting Member of the Legislative Council, and as Honorary Secretary of the Association, for seven out of the last ten years. He felt sure that he was only expressing the feelings of every member of the Association, when he said no man could have done more for the Association than Mr. Romilly had done, and we were all most heartily obliged to him. —Carried with acclamation.

A testimonial to Mr. Romilly in recognition of his great services was presented by the resident members of the Association.

Mr. J. W. Hockin was elected Honorary Secretary for the ensuing year.

GENERAL MEETING.—The meeting being resolved into a general meeting the following proceedings were recorded :—

Resolved that in the event of the appointment of such a Committee by Government Mr. J. W. Hockin be nominated by this association as its candidate for the post of planting member.

Resolved that in the event of another planting member being appointed by His Excellency the Governor of Madras this Association nominates Mr. H. P. Hodgson as its candidate for the post.

COST OF TEA PRODUCTION.

The cost of production of tea on the Nilgiris seems to vary very greatly. The most reliable figures we have hitherto obtained are from a garden off which a (manured) yield of 300 lb. average is obtained per acre; the size of the garden is about 200 acres. The latest machinery is used, the firewood is grown on the estate—which is well roaded—and in fact the circumstances for cheap production seems as favourable for high elevation gardens as they could well be. Yet the cost on the estate per lb. of tea runs up to 6 as. 3 pie, a figure declared by others to be greatly above the mark, though even the most favoured in this district cannot approach the mouth-watering Wynaad rates.—*Planting Opinion*, Feb. 15.

KONA COFFEE INDUSTRY.

The coffee industry in Kona is exceedingly bright. It is now harvest time and from all of the coffee plantations, as well as in every shady dell, coffee is being picked and shipped. One of the largest crops will be from the estate of the Hawaiian Coffee and Tea Company, which will probably yield not far from 15,000 pounds. Mr. C. D Miller, its manager, reports the most satisfactory results at an elevation of from 1,000 to 2,000 feet The blight has entirely left the plants in his care and the trees now appear thrifty.

Mr. Carl Buchholz, who recently purchased 200 acres of coffee land in Kona from Mr. Monsarrat, of Honolulu, is building his houses and making improvements preparatory to the commencement of active work. He will, as soon as possible, clear and plant at least fifty acres. Mr. Carl Buchholz, himself, leaves for Germany soon, but his brother is left in charge.—*Hilo Tribune* in *Hawaiian Commercial Journal*, Dec. 31.

TEA IN THE WYNAAD.—The *Madras Mail* has an editorial on this subject which we quote elsewhere. Comparison is made with Ceylon, and the opinion is expressed that when the annual returns for the young estates that have just come into bearing are published, it will be found that so far as mere quantity of leaf is concerned the Wynaad is able to hold its own against any tea-growing district in the world. The healthiness of the district is also defended.

UVAKELLIE TEA COMPANY OF CEYLON, LIMITED.

The statutory meeting of the shareholders of this Company was held in the office of the Secretaries and Agents (Messrs J. M. Robertson & Co.), Prince Street, at noon on Feb. 26. Mr. Henry Bois presided, and present were Messrs. W. D. Gibbon, W. B. Kingsbury, Moir (Secy.) and Vanderspar, Surgeon-Major Pike (by his attorney, Mr. W. B. Kingsbury), and Mrs. Gibbon and Mr. S. E. Tench (by their attorney, Mr. W. D. Gibbon.)

The notice calling the meeting having been read.

The CHAIRMAN submitted

THE REPORT.

The Directors have now to submit their First Annual Report and Accounts for the year ending 31st December, 1895.

The yield of tea during this period has been 97,711 lb.; the cost per lb. has been 29·81 cents; and the average net price obtained 51·84 cents.

The coffee crop has amounted to 899 22-32nd bushels; the net sum realised, after allowing a safe estimate for a small lot not yet sold, being R15,048·85.

The expenses in connection with the planting of tea, new caddies, and additions to factory have been passed to an Extension Accounts as Capital Expenditure.

After allowing for Depreciation on Buildings and Machinery 10 per cent. and 15 per cent. respectively, and writing off the whole of the Preliminary Expenses R1,140, there remains an amount of R25,722·61 for distribution.

It is proposed to pay out of this a dividend of 10 per cent. for the year, which will absorb R21,000, leaving R1,722·61 to be carried forward to next account.

The tea crop for the coming season has been estimated at 110,000 lb., and the coffee crop at 200 bushels parchment.

The Company's estate now consists of:—

	Acres.	
Tea 5 years old and upwards	300	About 70 to 80 acres interspersed with coffee.
,, 3 years old ..	60	
,, 2 ,, ..	50	
,, under 2 years ..	50	
	460 acres	
Forest, Chena and Patna	101 ,,	
	561 acres	

In terms of the articles of Association all the Directors retire, but being eligible, offer themselves for re-election.

It will be necessary to appoint an Auditor for the new season.—H. Bois, W. D. Gibbon, and W. B. Kingsbury.

Colombo, 8th February 1896.

The CHAIRMAN said the report and accounts which had been printed and circulated, he thought, gave all the information that would be of interest to the shareholders; but, if there was any further information desired, he should be happy to furnish it if it was in his power to do so. The certificate of incorporation of the Company was dated 6th March, 1895, so that the present was a statutory meeting as required by the Ordinance. The accounts covered a period of 12 months; but, inasmuch as the share capital or the bulk of the share capital was only paid on 16th March 1895, the revenue-earning period of the accounts was only 9½ months. The estimates for the coming year did not indicate that a very large dividend would be earned; but it had to be remembered that the Company was, to a certain extent, a development Company, having a considerable acreage of tea not yet in bearing; and, he had no doubt, when the whole place was yielding full crops, that the dividend would be satisfactory to the shareholders. As regarded the dividend they now proposed to declare, he thought, after writing off preliminary expenses, and considering that the working practically only covered a period of nine months, the result was fairly satisfactory.

In reply to a question by Mr. Vanderspar, the Chairman stated that the Company took over the estate from 1st January 1895 and they had to pay the interest on the purchase money until the shares were paid for.

Mr. VANDERSPAR:—In that case don't we get the benefit from 1st January?

The CHAIRMAN in reply to Mr. VANDERSPAR'S question said they had the benefit of the working of the estate from 1st Jan.; but *per contra* they had to pay interest on the purchase money from that date.

Mr. VANDERSPAR remarked that he thought the Chairman said 9½ months.

The CHAIRMAN:—The earning period is really 9½ months as the greater part of the earnings for two and a half months from 1st January is counterbalanced by the interest on the purchase money.

Mr. VANDERSPAR seconded the adoption of the report.—Report adopted.

The CHAIRMAN said the next business was to declare a dividend. The Directors recommended a dividend of 10 per cent. for the year.

Mr. VANDERSPAR proposed that a dividend of 10 per cent. be declared.

Surgeon-Major PIKE seconded.—Resolved accordingly.

Messrs. H. Bois, W. D. Gibbon and W. B. Kingsbury were, on the motion of Mr. VANDERSPAR, seconded by Mr. TENCH, unanimously re-elected Directors.

Mr. VANDERSPAR asked if there was any reason for the shortage in the estimate of the tea crop. He had worked it out and he found that the dividend next year could not possibly be more than 8 per cent.

The CHAIRMAN:—That is so.

Mr. VANDERSPAR:—Is the estate suffering from helopeltis?

The CHAIRMAN:—No. The tea crop is expected to come up to expectation, but the estimate for coffee is only 200 bushels as against 800 last year. It is due to the coffee. Mr. Gibbon informed him that, so far, the yield of tea was satisfactory and if the yield continued as it had done up to date they would do well. The coffee, on the other hand, was very uncertain.

On the motion of Mr. VANDERSPAR seconded by Mr. KINGSBURY, Mr. Hercules Scott was appointed auditor.

This was all the business.

QUININE POWDERS.—Having considered the report of the Government Botanist and Director of Government Cinchona Plantations, the Government observe that the figures furnished by that officer relating to the sale of quinine powders sufficiently prove that the experiment of the distribution of quinine packets by the Postal agency in the five districts originally selected has been on the whole a success, and that there is no reason why the introduction of the system into other districts should be delayed any longer. Mr. Lawson has accordingly been requested to arrange, in communication with the Postmaster-General, for the supply of quinine to the postmasters of the undermentioned districts:—Bellary, Salem, Anantapur, Kistna, Godavari, South Canara, Coimbatore, North Arcot, Trichinopoly, Tinnevelly, Tanjore, Nilgiris, Madura, Nellore, and South Arcot.—*Madras Standard*, Feb. 8.

TEA IN THE WYNAAD.

The cultivation of tea in the Wynaad has during the last few months been attracting attention outside the limits of Southern India. More than one capitalist has come up from Ceylon to prospect the district, and we have already chronicled the sale of Perindotty, the only old tea estate of any considerable size, to planters in that island. When the sales of the first breaks of tea from the Errumaculla and Chulika estates realised in the London Market 1d to 1½d per lb. over the average of the week for Indian teas, it became evident that the quality of tea from the Wynaad was all that could be desired. That the yield per acre is very heavy is beyond dispute. When the returns for Perindotty are made up for the current year, the yield per acre over the whole estate will, we understand, be, say, 550 lb. per acre. This figure in itself is not exceptionally high, but it must be remembered that it has reference to a plantation, many fields of which are planted up with bushes of what Mr. William Taylor, a Ceylon planter of long experience, has declared to be the worst *jat* he has ever seen in his life. This implies poor and infrequent flushing. When the annual returns for the young estates that have just come into bearing are published, it will be found, we believe, that so far as mere quantity of leaf is concerned, the Wynaad is able to hold its own against any tea-growing district in the world. The elevation at which the cultivation is carried on, viz. from 2,500 to 4,000 feet, will necessarily prevent any teas of exceptional quality being produced, but none the less they should be of those useful grades which always find a ready competition in Mincing Lane. In Ceylon we notice that Companies whose plantations lie at a similar elevation give handsome returns, though it must be admitted that the best dividends come from Companies in the low country or at an extreme altitude, *i.e.* from those estates which give either the biggest quantity or the highest quality. The cheapness with which tea grown in Southern India can be put on the London market will always be a most important factor of success. In both Travancore and the Wynaad the actual cost per lb. of tea to the producer varies from 4½d to 5d. In Ceylon we believe it is the same, but in Northern India it is stated to be 2d per lb. more. Too great stress can hardly be laid on this fact, for it allows the tea-planter of Southern India and Ceylon to either grow inferior leaf at the same profit or else to produce the same quality with nearly 100 per cent more profit to himself.

A correspondent, himself a tea-planter, but not of the Wynaad, has sent us the following note;—"The coffee crop for the past season may be looked upon as finished, and from all one hears the general result is somewhat disappointing as regards quantity. The high prices ruling at home and locally make the past season, however, a fairly satisfactory one taken all round. The recent boom in tea in the Wynaad seems to have suffered a little check. Several Ceylon planters who came here to prospect are said to have returned not by any means so favourably impressed to the future *El Dorado* that some proprietors in that district would try to make others think of the land they want to get quit of." We do not know on what authority our correspondent bases the latter statement. So far as we have heard, no Ceylon planter who has seen the younger clearings of tea in the Wynaad denies its extreme suitability for the cultivation. Some Ceylon men, we know, have gone back to the Island deterred by exaggerated accounts of the unhealthiness of the district. On this point *Planting Opinion* of the 15th instant writes:—"The Wynaad may not be able to boast of a sanatarium climate like Ootacamund or Nuwera Eliya, but generally speaking we believe it is fully equal, if not in fact superior, to any districts of like elevations in either India or Ceylon. Certainly it is very far from being so unhealthy, owing to its being so well opened out, as many 'new' districts we wrote of. As to labour, there is never any lack of it in the Wynaad, the supply there being probably better than almost any district in Southern India. We would have not dwelt at such length on the matter, had we not good reason to believe that the above attempts to frighten off Ceylon capital, have been selfishly made by men who feared lest large extensions should raise the labour rates." We can hardly believe that any Wynaad planter could be so selfish or so blind to the interests of the district generally as to spread false reports about its unhealthiness merely to scare away capital because it might *possibly* at some future date raise his rates of labour. This would be playing the cur in the manger with a vengeance."

Mr. H. M. Knight, the well-known planter of Travancore and at one time in Ceylon, who has recently been through the Wynaad, writes as follows in a Report of his on the question of climate:—"It has been the custom for planters in most parts of the Wynaad to leave their estates in the hot months, March-May, and live on the adjoining hills at a higher altitude, say over 4,500 feet, or to go to Ootacamund or elsewhere. This when coffee was the sole product was a pleasant and suitable arrangement both for Superintendents and labour, and has lapsed into a regular custom, and this no doubt has given rise to the widespread idea that the Wynaad is very feverish during these months; undoubtedly there is some ground for the report as fever prevails more or less all over India at certain altitudes before the south-west monsoon is well in. But I cannot believe fever is more prevalent in the Wynaad than other places at same elevation, nor do I think from all I heard that it is a very severe type." These remarks are straightforward enough; and if they be wrong we should like to have them contradicted on reliable authority with facts and figures given in support of the contradiction. To the best of our knowledge not a single European has died in the Wynaad from the direct effects of malaria during the past ten years. It is moreover too often overlooked that this type of fever is endemic throughout the greater part of India. If Madras, for instance, were not the seat of Government, but only the headquarters of a Sub-Collectorate, we have but little doubt that double batta and extra allowances would be granted on account of the prevalence and virulence of malaria, and with a good deal more reason than is the case at the present time in the Wynaad.

Nothing definite can be said of the effect of the climate of the Wynaad during the hot months on large gangs of coolies, for as Mr. Knight has pointed out, it has been the custom in the district to get rid of labour as soon as the hot weather set in. So long as there was no demand at that season of the year, there would certainly be no supply, but given the demand it seems to us no difficulty will be experienced in obtaining the supply, except, of course, the initial trouble which always attends every new departure. It may be taken for certain that imported labour will not stay in the Wynaad during the hot months when there is no work to be done, but once let it be known that there are wages to be earned, we see no reason why the wage-earners will not be present. Tea has been grown profitably in the Dooars and the Terai in Upper India and in the Kelani Valley in Ceylon, where fever may be said to be prevalent all the year round, so we can hardly suppose that all other conditions being extremely favourable, it cannot be grown profitably in the Wynaad merely because during two months of the year there exists a mild type of malaria. If, however, there are Wynaad planters who are honestly of opinion that fever of such type prevails as to present the cultivation of tea, we here ask them to supply us with the facts and figures on which their belief is based for neither at Vayitri nor at Sultan's Battery nor yet at Nellacotta have we heard of this virulent malaria.

The Hon'ble Mr. Romilly, in his annual report of the Wynaad Planters' Association said that he sincerely trusted that the scheme so often advocated by this Association of small acreage under different proprietors with central factories might at last be put into force, and that the old residents might share with the new-comers in the prosperity that is to come. If only this scheme were car-

ried out it would be well for all concerned. It is, no doubt, all to the advantage of a District for the residents to have a direct interest in the staple enterprise and not to be merely paid servants. There has been and always will be a tendency to convert tea properties into Companies, but as Mr. Capper pointed out in his letter to us the other day, in Ceylon at any rate this course only means that instead of a man having all his capital invested in one concern, it is distributed over several. Coffee, both Arabica, Liberian and Hybrid, still flourish in the Wynaad and so do pepper and cinchona, to say nothing of cardamoms, vanilla, jalap and annatto seed; indeed there is no district where so many products have been proved to thrive and give their yield in due season. Many of these unfortunately have small commercial value now-a-days, but tea is still a very profitable cultivation. Given the assurance of a central factory, every planter within the proper radius, wise in his own generation, will own fifty to one hundred and fifty acres of tea. —*M Mail*, Feb. 18.

WEST AFRICAN COFFEE.

A small sample parcel of coffee has just arrived in Liverpool from the west coast of Africa. As this is the first lot grown on the coast and brought to this country some considerable interest attaches to it, as very gr at things are expected of this new industry. Some considerable amount of money has been spent in the experiment to grow coffee in the vicinity of Lagos, and the Ilaro Estates and Plantations, Limited, have at last succeeded in proving the capabilities of the soil and climate in producing a coffee of very rich flavour, which has been valued by experts at 109s per cent. The coffee, made without any adulteration by chicory, contains all the stimulating properties and carries the delicious aromatic flavour necessary to please fastidious coffee drinkers. The estate covers an area of about 50 square miles, and contains over 70,000 plants,—*Journal of Commerce*, Jan. 31.

ANOTHER WONDERFUL COFFEE YARN.

South Carolina, as is now widely known, is already producing a first-rate article of tea for drinking purposes from plants grown in the State. We are glad to be able to make the encouraging announcement that there is now a very good prospect that it will soon be in a position to produce at home also much, if not most, of the coffee it requires for such purposes.

We have seen some of the home-grown coffee. A few seed were obtained last year by Mr. J.C. Ball, of Cordesville, and were planted on his farm, the Middleburg place, Cooper River, yielding a crop of about a bushel. Some of the product was roasted and ground and made into coffee, which was served to guests at his New Year's dinner a few days ago, and was pronounced by them to be of fine quality and flavour. Mr. Ball only claims for it that it is superior to Rio, and is sure that it will bear that claim at least.

Mr. Ball is so well satisfied with his experience of the new plant so far that he will plant several acres this year.—*Charleston News*.

The above is evidently the work of the professional liar, for a similar report is going the rounds, but applicable to other sections. Possibly it emanates from the same follow who described the man with a marble leg, and who is given to originating all manner of improbable stories and sending them to the press. As it requires from four to six years for a coffee tree to come into bearing, it is apparent that the South Carolina climate must be phenomenal in its adaptability for coffee-growing, if a tree produces "about a bushel" in one year. Two pounds to a tree is a big average yield. We imagine it will be some centuries hence before our Charleston friends will meet their requirement for coffee from local plantations.

P. S.—The above was written based upon the clipping, which evidently was condensed from the original by one unfamiliar with the characteristics of coffee. The full text of the article in the *News* indicates that the South Carolina coffee is not the coffee *Arabica* or *C. Liberica*, but a tree which produces a "bean" about the size of a "cowpea," and that in Europe it is called "German coffee," and is used as a substitute for true coffee. We imagine it is no more like coffee than burnt peas or rye mixture. The *News* article is misleading and calculated to puzzle the editor hunting for, sensational paragraphs.—*American Grocer*, Jan. 15.

A DISCRIMINATING DUTY ON TEA IMPORTED TO THE UNITED STATES.

The special correspondent of the *American Grocer* at Washington writes on Jan. 14:—

The first gun in the pure tea campaign has been fired in the House by Congressman Cummings, who has introduced the following bill providing for a discriminating duty on teas imported from this side of the Cape of Good Hope:

"*Be it enacted, etc.*, That there shall be levied, collected, and paid on all teas, the growth or produce of the countries east of the Cape of Good Hope, when imported from places west of the Cape of Good Hope, a duty of ten per centum *ad valorem*. And teas that have been entered for consumption or warehouse, or that have been permitted to remain unclaimed, or that have been permitted to remain for any purpose in any country intermediate between the country of export and the United States, shall not be considered as *in transitu* through such intermediate country, but shall be treated as teas imported from such intermediate country, and be valued and rated for duty accordingly."

This bill is being urged upon the attention of Congress by representatives of the tea trade, and a memorial has been presented to the Ways and Means Committee, in which some of the reasons for the legislation are set forth, and from which I abstract the following:

"Heretofore when the subject of duty on tea has been suggested, it has generally been opposed with the fiction of the 'free breakfast table' by some who have not understood the subject and the conditions which affect the production, distribution and consumption of tea. The fact is, the removal of the duty on tea has been a positive injury to the consumer, because of the poorer quality which has been imported since then.

"The Bureaux of Statistics shows that in 1873 the average import price of tea was double the price of today, and the consumption 1·53 pound per capita, which is now only 1·31 pound per capita. The consumer pays the retailer nearly as much today for a pound of tea as he paid in 1873 and receives a much inferior quality, which accounts for the falling-off in consumption. In contrast with this, we find that in all countries where there is a tax on tea the consumption per capita has increased, most notably in England, where the consumption has increased within the last twenty-five years from 3·63 to 5·53 pounds per capita.

"In England, where the duty is 8 cents per pound and the consumer gets better value for the same money, the consumption is four times greater than in the United States, where there is no duty. Some twelve years ago Congress, upon the recommendation of the tea trade, passed a bill excluding adulterated and exhausted tea. Although the bill has been of advantage, it has not prevented the importation of large quantities of poor tea. Duty is the only real safeguard; its imposition, as has been proved by experience, would retard the importation of poor quality by American merchants and at the same time prevent native shippers in the producing countries from exporting to this country, where there is no duty, the inferior and trashy teas they cannot send elsewhere.

"In conclusion, our Government would obtain considerable revenue from a tax, which is recognized by all governments imposing a duty on tea as the most satisfactory tax that has ever been levied; and when the consumer can obtain a better quality of tea for

his money, we believe the consumption within a few years will increase very largely, thus benefiting the consumer, the trade, and the Government."

A vigorous effort will be made to secure a favorable report on the Cummings bill, and while there is little prospect of any action by the committee while the Dingley bill is pending, as soon as that is disposed of the situation will be ripe for prompt and energetic action by the friends of pure tea.

W. L. CROUNSE.

DRUG REPORT.

(From the *Chemist and Druggist.*)

42 CANNON STREET, E.C., Jan 30.

OILS (ESSENTIAL).—About 15 tons of Citronella oil in drums have been sold within the last few days at 1s 10d per lb. c.i.f. for January, March, 1s 9d c.i.f. for January-May, and 1s 8½d c.i.f. for January-September steamer-shipment to London.

CEYLON TEA IN AMERICA.

We are in receipt of a letter from Mr. T. A. Cockburn dated San Francisco, 10th January, in the course of which he says:—

I heard recently from Bierach, who is anxiously awaiting word from London as to the Washington Pure Food Show, for which he can have advantageous terms for a Ceylon Court. He, however, requires assistance in undertaking such demonstrations, and at this juncture it is, I think, unfortunate your Delegate is absent, nor is there anyone with auhtority to act in such matters. Why not have Bierach appointed assistant to your worthy Delegate?—Then all business matters and these shows could be attended to during the Delegate's absence from this country. I received a few of the Planters' Association pamphlets (some 8 or 10 only), which the leading Grocers *were glad to have*, and put in their windows, but, I could do with 200 or 300 easily, or as many more as could be spared. I received a nice photograph of Bierach's Ceylon Court at Philadelphia, which I am sending you under separate cover. It looks an attractive place and there is a glimpse of a cosy, pretty, and artistic room inside, which looks most inviting. I notice a copy of your Overland Edition on a basket in the foreground. It looks a nice attractive place, with the numerous photographs of natives, Ceylon Scenery, and tea manufacturing processes. It must have been a good advertisement for Ceylon Tea generally, and is very creditable to Mr. Bierach. I think this will be admitted by all. I have not had time to read the last two *Observers* received, but was grieved to notice the deaths of poor old G. H. Hall and Richard Mant, who were fast friends and neighbours of mine for many years. They were alike in many respects, both clever, intelligent and well-read men. I got to know Mant well, and to know him was to admire and respect him, for beneath his rugged exterior there beat a warm and true heart. Hard-working, thoroughly conscientious, and kind-hearted, he was a good friend and neighbour. Keen on a hunt, a game of chess, or a hand at whist, many are the pleasant hours I have spent with others, in the ramshackle rambling old thatched bungalow on the patana, which is, alas, along with its late owner, no more. He was well-informed, and a discriminate and intelligent reader, and loved his books: he had a good memory, and who does not remember how he loved to recite or read some favourite piece of poetry; nor will the writer soon forget his singing of his favourite song, old "Bonnie Dundee"! I read with pleasure the sympathetic notice of your Kurunegala correspondent, and have seen the book mentioned, written by Mant's father, for private circulation, and of which our friend was justly proud. I remember on one occasion when "Hallie" and he were having a game of chess, and Mant was called away to speak to some kangani or other person. Rising abruptly from the table he capsized the whole business, table, chess-men, himself and his chair, and, in trying to save himself, brought down a big centre circular table, with books, photo frames, large vase full of flowers, table-cover, tobacco and pipes, &c., &c. Somehow or other both "Hallie" and myself were *in* it too. But we succeeded in extricating Mant at last with pawns and castles sticking in his ears, "Hallie," who was very amusing at times, remarking "He *always* does this, Cockburn, when he finds he is losing the game," and we chaffed Mant often about it afterwards. On another occasion I acted as barber, cropped close and trimmed him à *la Vandyke*, and took him over the hill to a neighbouring family, whom he hadn't visited or spoken to for many years. After that they were good friends. He was an amusing and entertaining story-teller, and his opinions and remarks on things in general were invariably instructive, and very frequently amusing. He may have made a few enemies, none of us is perfect; let him who is so, cast the first stone. A long farewell, and may he rest in peace.

I enclose a short notice relative to the Canadian exposition, which is going ahead with all speed, I am informed. I trust, when the Delegate is fully informed on this subject, that Ceylon will be to the front.

"MR. STILES COMPLIMENTED.

"When calling at St. Lawrence Hall yesterday, the Premier, Sir Mackenzie Bowell, and Sir Adolphe Caron, Postmaster General, warmly complimented Mr. Stiles on his successful efforts for the exposition.

"Soon after the arrival of the High Commissioner, Sir Charles Tupper, Mr. Stiles will confer with him, the Premier and Mr. Foster, the Finance Minister, with reference to the diplomas and medals. There is every probability of these being provided by the Government, and those much coveted awards will go over the world a lasting advertisement for Canada as diplomas are never hidden."

Since writing the above, I have received a small packet of 25 pamphlets from Mr. Bierach: these will be distributed by me on Monday next. Long before the Delegate ever came to this country, I wrote strongly on the subject of better packages for this market. I even went the length of indicating a good and suitable one, and I am glad to see that your Delegate's remarks on this subject bear out my contention that more attention must be given by planters to the style of package they adopt for this market. The demand for "Ceylons" increases, but it is slow work, and we must be patient.

THE BLENDING OF TEA AT COLOMBO.—In the course of a review of a letter by our contemporary of the "Times" regarding the Colombo tea market, the *Madras Mail* says:—

We are surprised to read that the people of Ceylon fear the growth of blending business. We should pronounce Colombo to be an ideal place for such a business, for it might directly serve all the markets of the world, with the exception of those of the United Kingdom and the eastern countries of Europe, with teas mixed to the liking of consumers. We premise that blending has contributed considerably to the enormous increase of popularity of British grown teas in the British Isles, and, granting that our premise is correct, it should be an equally important factor in extending the popularity of the same teas in other lands. Why Ceylon appears so very suitable to us is not only because of its central position in respect to the great tea-growing countries, but far more so because there would practically be only one or at most two ports of entry and exit, so that it would be easy to check and control all shipments. Some simple law, somewhat similar in its effect to the Merchandise Marks Act, would have to be enacted which would prevent China trash being shipped as Ceylon leaf, and which would also provide penalties sufficiently heavy to deter the fraudulently-minded blender from doing hard to the local industry. There surely can be no difficulty in drafting and passing such an Act.

COLOMBO TEA TRADERS' ASSOCIATION.

The annual general meeting of the Colombo Tea Traders' Association took place on 21st Feby. in the Chamber of Commerce Rooms. Mr. F. M. Mackwood presided, and present were: the Hon. W. W. Mitchell, Messrs. C. E. H. Symons (Secretary), Duplock, Henry Bois, Lampard, W. Seale, L. O. Leefe, W. Haslam, Barber, F. F. Street, A. H. Thompson, G. Thomson, Walker, W. E. Mitchell, A. Gordon Frazer, G. H. Alston, Hancock, R. Caldicott Smith, and W. H. Figg.

THE ACCOUNTS.

The SECRETARY read the notice calling the meeting and minutes of previous meetings.

TEA TRADERS' ASSOCIATION.

The CHAIRMAN said they had heard the minutes of three previous meetings, and if they met with the approval of the meeting, he would sign them. He was following the precedent that was established last year—this being the second year no report had been presented. It was taken for granted that the reading of the minutes of all the general meetings constituted practically a report of all that had been done, and that it was a record of the year's work He proceeded to the presentation of what they might call their accounts. These accounts were very simple. They began the year by carrying forward a balance of R515·75. To that had to be added the subscriptions from members received since amounting to R370, making a total of R885·75. The Secretary had expended for advertisements, etc. the sum of R177·65, leaving a balance of R708·10 on hand, which was the result of their year's work as regarded finances. He inquired if any member present would like to speak on the question of accounts, or whether anyone might express the view which he heard in one or two quarters, that it would be better to have a report, however short, embodying in a few words what they had done from year to year. He left it to the members to speak on the subject.

Mr. LAMPARD moved the adoption of the accounts.

Mr. W. H. FIGG had pleasure in seconding. He thought it would be desirable to have a short report yearly. They had just heard the minutes of the general meetings read, but there was a certain amount of business done in Committee of greater importance of which the general community might know nothing. He would therefore suggest that a short *résumé* of the business of the year be issued in a report and circulated a week before the next annual general meeting.

The CHAIRMAN said that, personally, he was in favour of the proposal and he thought it would be well to have a short report ready for their general meetings. They had done a fair amount of work; they had made alterations on the rules, made certain suggestions and discussed certain matters of short weight which were likely to bring Ceylon into bad repute in other markets, to say nothing of the annoyance caused to sellers and buyers amongst themselves. He thought it desirable they should have a report.

The accounts were passed and the suggestion that a report be furnished to next annual meeting was adopted.

THE COMMITTEE

was then balloted for with the following result:—*Buyers*: Messrs. Duplock, Street, and Tarrant; *Sellers*: Messrs. Whittall & Co., Messrs. J. M. Robertson & Co., and Messrs. Bosanquet & Co.; and *Brokers*: Messrs. Forbes & Walker, Mr. E. John, and Messrs. Somerville & Co.

The CHAIRMAN moved that the Secretary be authorised to write to the firms which had been appointed asking them to nominate a partner or member of their firm who would attend to the work of the Committee; and, in doing so, he trusted he might be permitted to express the hope that the gentlemen nominated would be those who would really attend. They had sometimes had to wait a considerable time, on one or two occasions they had had to wait half an hour, whipping up members before they could obtain a quorum.

Mr. WALKER thought it was a most desirable thing that the Secretary should continue to do as he had done that day, to send them a reminder on the morning of the meeting, otherwise some of them were apt to forget about the meetings.

The Chairman's motion was carried.

A RESOLUTION.

The CHAIRMAN said he now came to put the resolution of which they had all received notice. It was a fresh departure on which there might be some difference of opinion. The matter had been considered necessary by a great many, owing to the increased trade of Colombo, and although it did not originate with him he had been asked to put it from the chair, which, after some consideration, he consented to do. The resolution was as follows:—

"That on and after Wednesday, 4th March, the following alteration be made in Rule 4 of the Conditions of Sale:—The words 'within 5 working days of date of sale,' to be substituted for 'within 3 days of date of sale, Sundays and Public Holidays excepted."

There was a slight difference members would notice. They spoke of 5 working days instead of 3 days for the simple reason that five working days got rid of Sundays. He had no doubt some of the gentlemen who had felt the pressure of work and the annoyances connected with inspecting tea, getting railway orders and checking invoices &c would speak to the meeting. He felt that, with what was an admirable rule two or three years ago when they were selling less than half the quantity of tea, it was now almost impossible to go through the necessary routine, if they were to get away their tea and exercise the simplest and smallest precautions as to the condition of packages, checking weights, &c. If all their tea was in separate warehouses or godowns in the Fort it might be possible to go on at present; but, when they recollected that a great deal of the tea, they bought might be found anywhere in stores north and south within a radius of two to three miles from the Fort, he thought it would convince anyone of the impossibility of carrying out the existing rule. He would therefore propose that this alteration come into force as from Wednesday, 4th March.

Mr. DUPLOCK said he begged to second the resolution. The Chairman had described the case tersely and clearly, and it was not necesary for him to emphasise what the Chairman had said, because, if he spoke for an hour he could not put it more plainly than the Chairman did when he stated it was utterly impossible to collect their teas. They did not mind paying for them—they would pay on the morning after the sale for that part—but then they often did not get in accounts till Saturday. Then they had got one half-day to collect their teas. They could not do it, try how they would; and some of them thought that the responsibility should last longer than a few hours with the seller, and if

the responsibility were made to last two or three days longer, the sellers would only be taking on their shoulders that which they ought to take upon their shoulders. For his own part he thought the resolution was too modestly framed. He should have much preferred to see the five days made ten days but he was told that he should not have the least chance of getting ten days carried and therefore he accepted half a loaf in preference to no bread. The hardship came in when they parted with their money for tea which was lying, through no fault of their own, till Monday or Tuesday in other people's godowns, at their own risk. They thought the risk should rest with the sellers a sufficient time until buyers had time to collect their teas. He did not think any one could urge any objection to what had been proposed.

Mr. BOIS asked what was the time in Calcutta.

Mr. DUPLOCK replied that the time was 10 days. There, one did not pay for teas until he got delivery of them.

Mr. BOIS said they had already passed a resolution to give more time for tasting; now they were proposing to take that away.

Mr. GEORGE THOMSON said that passing the resolution would bring the conditions of sale more in accordance with those obtaining in other markets. He said let them go ahead with the times. So far as they know, the seller could store kerosine beside their tea. The buyer had no protection.

Mr. GORDON FRAZER although sympathising with the motion that some time should be given to buyers to take delivery of their tea, thought that the great advantage of the market to their upcountry clients—its quick returns—would be done away with, if two or three days were added to the time. Speaking for himself he would be quite prepared to accept responsibility for anything that remained in his store. He did not see there was any object in adding two days to the time, because it took off two days from the time the planter got his return. He understood from Mr. Duplock that it was not a matter of payment and that they were perfectly prepared to pay at once.

Mr. DUPLOCK replied that he spoke for himself, personally. He would pay for his tea on Thursday afternoon. But they never got their accounts until they had dunned sellers to send them in.

Mr. WALKER did not consider there was any use extending the time for delivery until they extended the time for payment. The planter would not get his money any sooner until the buyer knew whether his tea was right or wrong.

At this stage, Mr. GORDON FRAZER, after consultation with other members, withdrew his motion.

The CHAIRMAN said the question on which Mr. Frazer thought it would be better to move an amendment was one that was discussed; and they felt it was impossible to separate the two days—taking delivery of tea and the matter of payment.

The Hon. W. W. MITCHELL said the resolution must be looked at from two points of view, the buyer's point of view and the seller's point of view. The resolution had been put forward in the buyer's interests.

The CHAIRMAN:—In the general interest, if I may say so.

Mr. MITCHELL (proceeding) said he sympathised with the buyer who could not take delivery within a certain specified time, but he was of opinion that the longer time they gave people the longer would they take, and he was afraid people would not send in their bills until Monday or Tuesday, and then they would have no relief. Under the present system they cleared off one week's work before they took another on hand. If they went to take delivery of teas on Monday they would clash with teas coming from upcountry that day. Looking at it from the seller's point of view or the broker's, he would have to provide a larger amount of warehouse or godown accommodation. (Cries of "Hear, hear," and "So they ought.") Why should he be obliged to do that?

The CHAIRMAN:—Because it is his duty (and a voice "He is paid for it").

Mr. MITCHELL continuing remarked that for his own part he had not felt any inconvenience. He would rather see the rule as it was, because he felt that any alteration would simply lead to confusion at the beginning of the week.

Mr. FIGG said, with reference to what had fallen from the Hon. Mr. Mitchell, that up to a recent time the tea trade of the Colony had been a small one and they were only just now on level terms with bigger markets like Calcutta where he believed the time was 10 days. As their business increased, so must the time which was allowed. If the necessity of godown accommodation arose such accommodation must be provided for. It had got nothing to do with the buyer, and he was sure the planter had got everything in reason, and they were ready to meet the planter in every way possible, but the proposal before the meeting was nothing more than was reasonable.

The resolution was then put to the meeting and carried, Mr. Mitchell being understood to dissent.

Mr. A. H. THOMPSON asked when the five days terminated.

The CHAIRMAN said he should say up to one o'clock.

Mr. DUPLOCK said he was in favour of 5 o'clock.

Several members expressed the opinion that it should be up to the close of banking hours on Tuesday.

The CHAIRMAN concurred and this became the understanding of the meeting.

Mr GORDON FRAZER suggested that it would facilitate the working of the trade from the broker's point of view by the cessation of contracts for the sale of tea. This was not done in London, and he never heard of its being done anywhere else. To a seller a contract was necessary, but what more contract did a buyer want than the knocking down of the hammer? It would insure the quicker delivery of accounts if they were allowed to waive this contract.

Mr. DUPLOCK said the contract was in force in Calcutta. For himself, personally, he never looked at his contract, but consigned it straightway to the waste-paper basket. (Laughter.)

Mr. GORDON FRAZER said it was never enforced in London and he thought it was useless. If it worked well in London, he did not see why it should not be applicable in Colombo.

The CHAIRMAN remarked that probably the Committee would consider the point.

The meeting then terminated with a vote of thanks to the Chairman proposed by Mr. FIGG.

INDIAN TEA ASSOCIATION.

ABSTRACT OF PROCEEDINGS OF A MEETING OF THE GENERAL COMMITTEE.

Submitted letters of 22nd and 29th November and 6th December, from the Secretary, Indian Tea Association London. The principal matters referred to in these letters were the marking of weights on chest of tea intended for the American market and the packing of Dust Teas. Copy of letter of 20th November from the Secretary of the Tea Brokers' Association. London, was enclosed intimating they were not in favour of placing any marks on the packages. (The letter is printed as an appendix to the minutes.) With regard to the packing of Dust Teas, copy of letter was enclosed from Messrs. Stenning, Inskipp & Co., which is also printed as an appendix to the minutes, suggesting that Dust Teas should be packed in half chests either of metal, or in strong and well made wooden packages, iron hooped, and a circular embodying these recommendations had been issued by the London Committee, which is also re-printed below.

Submitted letter of 16th December, from the Chairman, Ceylon Planters' Association, asking for information as to the terms on which a reduction in passage money of Tea Planters was granted by the Liners' Conference. It was decided to reply to this letter stating that the only concession given to Planters by Liners was a reduction of R100 on the passage money from Calcutta to London; no rebate was given on the return passage, no allowances were granted on passages from Bombay nor any allowance for families. There were no printed rules governing the matter, but a reduction was given to all persons who were certified as planters by the Agents of Tea Gardens.

Considered letter of 9th January, from Messrs. Bathgate, Pim & Co., enclosing copy of a letter they had received from London, regarding a firm in New York who were desirous of entering on the trade in Indian Tea, and asking if a guarantee could be given from the American Market Fund for such business. In reply to this letter Messrs. Bathgate Pimm & Co. were to be informed that they were under a misapprehension as regards business of this kind being subsidized.

Considered letter of 3rd January, from Secretary to the Government of India, Department of Revenue and Agriculture, forwarding for the consideration of the Association extract from a Memorandum by Dr. Watt, Reporter on Economic Products, on the proposal to appoint a scientific expert for the investigation of questions connected with the Tea Industry Government had thought well to send the Memorandum in question before replying officially to the Committee's letter and it was stated that Woodburn would be quite ready to grant an interview to any representative appointed by the Association if they thought any useful end would be served by personal discussion. The Committee, however, considered it premature to enter upon a personal discussion of the matter at present, and it was resolved to forward the paper in the first instance to the Chairman of the Assam Branch from whom the proposal originally emanated and to ask him if he had any remarks to make upon it.

Submitted statement of contributions to the American Market Fund showing the total amount subscribed to the 31st December to be R88,879 representing a production of 77,067,618 lb. A detailed list of the Gardens' contributions was also submitted and a further statement showing that R6,983·15 was outstanding. The Committee considered the result of the levy was satisfactory.

(True copy).

W. PARSONS, Assistant Secretary.
H. S. ASHTON, Chairman.

THE TEA BROKERS' ASSOCIATION OF LONDON.

118, Dunster House, Mincing E.C.,
November 20th.

ERNEST TYE, ESQ.,
Secretary, Indian Tea Association (London).

DEAR SIR,—In reply to the question contained in your letter of 16th September, with reference to the stencilling of Gross Weight and Tare on packages of Indian Tea, I am instructed by our President (Mr. W J Thompson, Jr) to inform you that enquiry has been made amongst some of the leading dealers who are unanimous in objecting to such process as tending to cause disputes between themselves and their customers whenever a difference occurred between the Factory and Customs weight, one firm going so far as to say it would not knowingly buy any Tea so marked.

It is presumed, however, that the matter would be of indifference to the Blenders who now constitute a large section of the Buyers.

I am requested to send you the enclosed extract from letter received from the London Wholesale Tea Dealers' Association and to ask you to kindly bring the subject to the notice of your Members.

Yours faithfully, W. G. PRICE, Secretary.

EXTRACT FROM LETTER, LONDON WHOLESALE TEA DEALERS' ASSOCIATION,

Dated 18th Nov. 1895.

"I am requested to ask you to be good enough to draw the attention of importers to the serious loss and inconvenience which arise from Dust Teas being in packages not properly protected against leakage and to suggest in the mutual interest of Seller and Buyer, it is desirable that such packages should be canvassed or otherwise protected before being shipped abroad."

14, MINCING LANE, E.C.,
November 26th, 1895.

ERNEST TYE, Esq.

Dear Sir,—We thank you for Circular of yesterday's date. We would point out that so long ago as 27th March 1890, we wrote the following in our circular of that date:—"In view of some recent cases of heavy loss in weights in respect of small broken and dust descriptions we throw it out as a suggestion to Planters whether it would not be advisable to pack such Teas in future in metal boxes." To this we would now add that as the weight of the above sorts is so heavy, it would be better to pack in *Half-Chests* either of metal or in strong and well made wooden packages, iron hooped.

We do not advise packages being canvassed for shipment as it would be impossible to see their condition besides it is also probable that less care would be taken in handling them in transit, and Tea that escaped into the canvas would be unfit for use.

We are, dear sir, yours faithfully,
STENNING, INSKIPP & Co.

THE INDIAN TEA ASSOCIATION (IN LONDON).

With reference to the packing of Broken and Dust Teas, it is pointed out for the information of Members that it is desirable owing to the weight of these descriptions, to pack them in half-chests, either of metal, or well made, and iron hooped wooden packages.

The use of canvas covering is objectionable.

They not only serve to hide the condition of the packages but probably less care is taken in handling them in transit, besides which, any Tea that may be retained by the canvas would soon become unfit for use. ERNEST TYE, Secretary.

5th December 1895.

—*Indian Planter's Gazette*, Feb. 8.

FROZEN FLOWERS FROM AUSTRALIA.—It is stated in the *Westminster Gazette* of November 28, that a fine collection of blue and white Water Lilies (Nymphæa gigantea) has been sent by a leading florist in Sydney, N.S.W., through Sir Saul Samuel, the Agent-General, for presentation to her Majesty the QUEEN. The Lilies were frozen in ice, and received as long ago as August last by the Clonial Consignment and Distributing Company, Limited, being stored at Nelson's Wharf, until Wednesday, November 27, when they were delivered at Windsor In spite of the length of time, the flowers were in perfect condition, and, seen through the transparent ice were very attractive.—*Gardeners' Chronicle.*

THE WYNAAD.

The London *Times*, in an ably-written article, having for its text the deputation of the planters of Southern India that lately had an interview with Lord Elgin, recites the leading difficulties under which the planting enterprise in the Wynaad now suffers. Want of communication with the seaboard, of protection for produce in transit, proper organization of labour, and fixity of tenure, and of security of the results to taxation, are among the chief disabilities set out in this article. Our London Correspondent thinks it to be possible that those planters who, being crowded out from Ceylon by our local policy of restricting land sales, are seeking investments in the Wynaad may wisely have their attention called to the very full statement contained in the *Times*. It would seem certainly to be impossible that the planter in the Wynaad can have any reasonable chance of competing either with those of Ceylon or with his fellow tea planters in Assam and other districts of Northern India, while his interests are weighted by such cramping difficulties as those therein set forth, We are not without causes of complaint in Ceylon, wherein tea planting constitutes relatively the prime consideration of its governing power. But although these demand and obtain strong remonstrance—as yet relatively and in some instances ineffectually—we believe it will be admitted that Ceylon is, in comparison with the Wynaad at all events, the Elysium of tea planting. Certainly the *Times* by its revelations utters a by no means indistinct note of warning to those of our own planting community who contemplate investment in the district, the planters of which have such grave reasons to complain of want of attention to their interests. But the fact that there is now scarcely an opening to be found in Ceylon for the younger men who have come here to learn tea-planting inforces these turning their attention to the wider field open to them in Southern India. So compelled, the exodus will no doubt be made, and this must yearly increase the competition that Ceylon now experiences from India-grown teas. In India the area of tea cultivation will be yearly extending, while in Ceylon it must, if the present policy of our Government be persisted in, be restrained within its present area. Surely a policy productive of such a resent cannot be a wise one for us to follow. We have repeatedly pointed out that this colony still possesses reserves of land suitable for tea planting that might be sold without injury to the maintenance of needed public reservations. We need not here recapitulate what we have before written as to this matter. But when we see as we do that, owing to this policy, we are doing our best to foster competition with Ceylon in India, it is time to reiterate our remonstrances formerly made. For although it is evident from the *Times's* article that tea-planting in the Wynaad is at present so heavily handicapped by the conditions under which it has to be carried on that competition by it with ourselves must be relatively hopeless, this cannot now long remain the case. When redress is granted, the few who now leave Ceylon for India, despite existing difficulties, will certainly have their numbers largely increased. All the capital, and all the talent and experience that might be retained in Ceylon will pass over to the opposite Continent to increase the competition against which we now have to contend.

TEA IN THE WYNAAD.

You recently referred to the desire of some of your planters to undertake operations in the Wynaad. We believe it to be the case that several of these have already acquired interests in that Indian district, one that appears particularly well suited to tea planting by Europeans. But there is no picture, we are told, however pleasing it may be, that has not its reverse side. What this last is in the case of the Wynaad has been luminously set forth in an article that appeared under the heading of "Indian Affairs" in the *Times* this week. That article contains numerous references, by way of giving contrast, to the condition of things in Ceylon, and is possessed beside of so many other points of interest that it seems desirable that you should be supplied with a copy of it. One is accordingly enclosed with this letter. [See page 621.—Ed. *T.A.*] It is not known to us how far you may already be acquainted with the circumstances therein set forth. But any way the writer puts all the points with such remarkable clearness that his statement of the position cannot be without interest for those of your readers who may be contemplating acquiring properties in the Wynaad. He states that a deputation of the United Planters' Association of Southern India recently interviewed Lord Elgin on the occasion of his late visit to Madras. Its members strongly complained of the labour difficulties under which the planting enterprise in the district is conducted, and of the want of protection for their produce while in transit to the coast. The article recites many other disabilities under which the planters of Southern India lie. Want of good roads is the main objection taken to the present state of things, and in this respect comparison is made with the competing country of Ceylon. It is suggested that legislation is needed for Southern India of the character that now protects the planting industries in the northern districts of that continent. Assuredly all is not yet perfect in Ceylon, but, equally assuredly does it seem to be the fact, that, as compared with the Wynaad, your planters enjoy very great advantages. If those of the Indian district are to have a chance of successfully competing with those of Ceylon, it would seem to be evident that the existing inequality between the two in this respect of roads and of other matters must receive redress. To outsiders like ourselves the perusal of the article sent you leaves an impression that it can scarcely be desirable as yet for Ceylon planters to extend their operations to Southern India. It, however, seems to be the case that many are inclined to do so and that some have already invested capital there. Whether others will feel inclined, after reading the statements in the *Times*, to follow their example, cannot be predicted. Should they do so, however, they cannot say that they are now left in the dark as to difficulties they may have to contend against of a kind comparatively unknown to tea planters in Ceylon. It is evident that the writer of the *Times's* article thinks that in Ceylon you have none of the causes for complaint that have been advanced by the deputation that waited upon Lord Elgin. But it is only those who wear the shoe that know where it pinches, and probably the *Times* writer is unaware of your railway stations being left for years without means of access, and of other minor difficulties with which your planters have from time to time to contend.—London *Cor.*

THE RAYIGAM COMPANY, LTD.

We have received a copy of the prospectus of this Company which has been formed with a capital of R1,000,000, in 10,000 shares of R100 each, of which only 4,250 will at present be issued. The provisional directors are Messrs. F. M. Mackwood, Gordon Frazer E. Rosling and A. Rosling; Bankers: Chartered Bank of India, Australia and China; Proctors: Messrs. Julius & Creasy; and Agents and Secretaries: Messrs. Mackwood & Co. The Rayigam Estate which is in the Nambapana division of Kalutara consists of 350 acres tea over three years old, 219 acres tea from one to three years old, 84 acres land now being holed, and 547 acres forest; total 1,200 acres. The property has been valued by Mr. E. D. Harrison at R402,500 on a seven years' purchase, and on the basis of yield of 500 lb. tea per acre. All the old tea has, however, given 560 lb. per acre. The price which the Vendors have agreed to accept is R400,000, half of it in fully paid-up shares, and balance cash—the remaining R25,000 being called up—is to provide permanent bungalow, two sets permanent lines, complete the new clearing, and take over Coast Advances. The property is being taken over from 1st Jan. 1896.

PLANTING AND PRODUCE.

Planting in Southern India.—Southern India as a field for tea enterprise is very much in evidence just now. Enterprising young men from Ceylon and elsewhere are turning their attention to it, and capitalists at home have their mind's eye in that direction. Planters on the spot are eager to show that they are quite aware of the strength of their position, and there is a general feeling of enterprise which will no doubt soon show important results.

A Seasonable Pamphlet.—A pamphlet on "The Wynaad and the Planting Industry of Southern India," by Mr. Francis Ford, has recently been issued, and very effective it is as a graphic description of the country and the people. If the thousands of young men on the look out for something to do at home should chance to read some of Mr. Ford's word-painting there will be an increase in the European population of the Wynaad. Here is a description from Mr. Ford's pen: "It is January in the Wynaad. The coffee planter is still busy with his crop; the tea-planter is looking forward to his annual holiday, for during the following few weeks, there will be no rain, and the bushes will rest until the showers of March have fallen. The weather is lovely; bright days and chilly nights. When the moon is at the full the whole land is bathed in silver light, and so clear is the atmosphere that hills distant thirty miles may be discerned. This is the rutting time of the sambhur; sharp and defiant rings out the belling note all night, echoing among the silver hills. In the early morning there is a crisp feeling in the air which speaks of frost, though it never falls in these uplands. A light mist lies in the swamps and bottoms of the valleys, which quickly passes away once the sun has risen. All the day the planter is able to be out and about without minding the heat." Here is another: "Clouds lie low on the land. Looking down from an eminence it is as though a sea of grey silent waters covers the face of the earth. As the dawn comes up rays of gold glorify its surface, and there is a shimmer of opalescent light. Noiselessly subside the cloud-billows; now one peak, now another appears; wooded promontories jut out and forests rise from the vaporous flood. Before the day is two hours old all the tumbled woodland scenery stands out in radiant loveliness, stretching away to the purple distance, with wreaths of snow white cloud sweeping round the hills." But Mr. Ford's main object, we take it, is to show that the Wynaad is the place where tea may be successfully cultivated, and his views are fairly rosy. It is with tea cultivation as with many other things, a case of the survival of the fittest. If tea can be grown in Southern India to greater advantage than elsewhere the cultivation of the product will pay. In these days of plentiful production the weakest will assuredly go to the wall. It is not a question of more tea, but a case of who can grow it profitably. Those gardens which are handicapped in the general competition will suffer. The consumption of tea cannot go on increasing without limit. The Wynaad is, no doubt, in many respects a paradise for planters, but even in an earthly paradise the producer has to compete with his neighbour. Mr. Ford is right in advocating the view that tea planting can best be undertaken by a company, and if the proposed company set to work in a careful and economical manner there ought to be excellent prospects of successful results in Southern India.

Planters and the Government.—The weekly article in the *Times* on Indian affairs is this week devoted to the planters of Southern India and the Government. Mr. Ford's book is referred to and quoted in it. The writer in the *Times* says: "Lord Elgin, on his recent visit to Madras, was addressed by a deputation of the United Planters' Association of Southern India. They laid before his Excellency the labour difficulties under which their enterprise is conducted, and the need of increased protection for their produce while in transit from the interior to the ports. The Viceroy, in reply, indicated a willingness to consider the expediency of issuing a commission of inquiry, and it is generally hoped that such an investigation will shortly take place. The grievances of the Southern Indian planter are very practical. He makes no great demands on the Government, but the demands which he does make he regards as indispensably necessary for the working of his business. Fixity of tenure in his estate, safeguards against fraud in the supply of his labour, protection of his produce against theft, and adequate means of communication towards the sea—these are the initial conditions for successfully planting in any country, and they sum up the total of the South India planters' requests. The truth is that in Southern as in Northern India the pinch of competition with other Asiatic countries is every year more keenly felt. The Indian planters merely ask that the Indian Government shall awaken to the fact of this competition, and shall give them the fundamental facilities which a good administration ought to give for carrying on their industry. In the north as in the south we see densely overcrowded districts, and at no great distance from them other districts into which labour has to be imported at almost a fancy price. Between certain of these underpeopled and overpeopled tracts the insufficiency of means of communication acts as a breakwater against the free flow of the population. We also see large sums of British money invested in reclaiming and planting the jungles, with inadequate guarantees as to the claims which may be eventually made by Government on the improvements. From the North as from the South come the same complaint of want of roads or of insufficient expenditure on works for the control of the rivers. A book just published at Madras, 'The Wynaad, and the Planting Industry of Southern India,' sets forth the result of this state of things. The author, who writes under the pseudonym of Francis Ford, has evidently had a very practical experience of his subject, both as a planter and as a coast agent. Until a few years ago, he says, it was idle for the British capitalist in Southern India to plead with the local government for the facilities necessary for the conduct of his industry. Even though he might be supported by the district officers, the reply that he practically received was this: 'You have come to the country avowedly to make money; you must accept things as they are; otherwise you are free to return whence you came.' This demeanour of Government is the main reason why the mineral resources of Southern India remain undeveloped; why manufacturers lag behind; and why the natives of the country do so little in their private capacity to open out new industries or to extend old ones.' "

"We reproduce the foregoing sentences," says the writer of the article in the *Times*, "as they embody

the view of large numbers of Englishmen who have invested their capital in India. These gentlemen compare the starvation allowances for roads and facilities of communication in backward Indian districts with the liberal policy displayed by the Governments of competing countries, such as Ceylon and Japan, in creating facilities for internal development. It would almost seem as if the interests of the Indian Government are so vast and so varied that it is unable to give the same attention to European enterprise that is given by smaller and more self-centred Governments, such as that of Ceylon. The local taxation which an Indian Provincial Government may have thriftily got together for the purposes of internal development and local public works has been liable to be swooped down upon by the Supreme Government of India to make good the expenditure on a frontier war, or to avert a deficit due to other causes. This subjection of local finance to Imperial exigencies forms a recurring source of weakness in the position of the Provincial Governments of India. It is perfectly well known that certain of the tea districts of Bengal have been starved of the necessary means of internal development from such causes. It is equally well known that the Assam tea districts were similarly starved until erected into a separate administration with a strong succession of Chief Commissioners to insist upon their claims.

ADMINISTRATIVE STARVATION.—"Such periods of starvation are, however, seldom continuous. Even in Madras Lord Wenlock has done something to recognise officially the claims of British industry. Yet we believe it is little more than a year since a planter was appointed for the first time a member of the Madras Legislative Council—that is to say, of the body which regulates the *status* and rights of the planting industry in Southern India. So far as we are aware, no tea planter has been appointed as such to the Bengal Legislative Council, although the commercial member of that Council doubtless does his best for all the mercantile industries of the province. Mr. Ford insists on the shortsightedness of a policy of adminstrative starvation, even from the public revenue point of view. He states that the planting industry expends annually in Southern india 13,000,000 rupees on the cultivation of land which but for that expenditure would be unproductive. He maintains that if the same facilities for development were given in Southern India as in Ceylon this expenditure would rapidly increase. "There is no reason,' he writes, ' why the cultivation of tea and coffee should not be regarded by the capitalist as favourably in the Peninsula as in the Island, except that hitherto communications here have been bad and that inadequate protection for the produce and no safeguards for the maintenance of a steady supply of labour have been granted.' We should accept these words as an expression of opinion rather than as a statement of ascertained facts. But Mr. Ford supports his opinion by a striking example. The Government of Mysore, while it remained under British rule, dealt with the question of independent British enterprise somewhat, although not altogether, in the same spirit as that shown by the Madras Government. The great famine of 1876-77 left Mysore almost bankrupt just before its rendition to the native dynasty in 1881. We lately recorded the recuperation of Mysore from its financial difficulties under the late Maharajah and his able Prime Minister. Sir Theshadri Iyer's administration would do credit to any British province, and forms an important testimony to the capabilities of native rule. Mr. Ford points out, however, that in the high praise which 'this splendid recovery' won from the Government of India an important factor was overlooked. Sir Theshadri Iyer wisely encouraged European enterprise and strained his resources to the utmost to afford the administrative facilities such as roads and leases for developing it. The result has been that for many years the European plantations poured into Mysore a sum of 7¼ million rupees annually in return of labour. 'It was this Pactolus which made the task of the Diwans of Mysore not only posible, but easy.' As a matter of fact Mysore used to supply most of the labourers employed in the neighbouring British districts. It still supplies some of them, but a large proportion are now retained by profitable employments in Mysore itself.' 'To the planting enterprise,' says Mr. Ford, 'This province owes the strongest debt of gratitude for helping it to tide over those evil times.' The South India planters think that there are special reasons why the commission of enquiry, half agreed to by Lord Elgin, should now be granted. The local officers are acquainted with their case and admit the justice of the claims. They have now a representative in the Madras Legislative Council, and they understand that the Madras Government recognises the expediency of legislation dealing with their special needs. But they have not yet been able to convince the Supreme Government. 'The planter affirms,' writes Mr. Ford, 'the necessity of such legislation; the local administration, with a full knowledge of the facts of the case, supports him, but the Government of India stiffens its back in its ignorance and declines to hear reason.' This puts the case perhaps too harshly, from the planters' point of view. In the new Governor of Madras they will have an administrator intimately acquainted with the system under which Ceylon has made its brilliant industrial progress."

THE INDIAN TEA ASSOCIATION (LONDON) AND THE *Times'* ARTICLE.—Mr. Ernest Tye, the secretary of the Indian Tea Association (London) has favoured us with a copy of a letter referring to the above subject, which has been forwarded by him to the editor of the *Times*. The letter is as follows: "Your article of yesterday on the subject of the planters of Southern India sets before the public with absolute clearness the difficulties of planters, not merely in the south, but in all parts of India. The association which I have the honour to represent cannot but feel thankful to you for the effective way in which you have in your columns, for months past, set before the public one of the most important questions affecting the industrial development of British India. I refer to the persistent diversion of provincial funds to meet the demands of the supreme Government. As long as the Supreme Goverment in India is not allowed to raise sufficient revenue to meet its obligations, Provincial Governments will be fleeced again and again to supply its necessities, and will be required to strave roads, railways, and other public works. In its character as representing the whole of the planters of India, my association is highly gratified to observe that the Viceroy expressed willingness to consider the expediency of issuing a commission of inquiry into the grievances of the planters of Southern India, but possibly the scope of inquiry of such commission might be extended to other provinces of India besides Madras. Good roads, good means of communication, improved steamboat and railway services, are in crying request all through the planting districts. As you have pointed out, the condition of Assam has greatly improved in this and similar respects since, by its conversion into a separate Provincial Government it has met with the more direct attention of able administrators, but even in Assam there is much room for advance. Without the hearty co-operation of Government it must be impossible to make those improvements in obtaining and transporting coolie labourers which are urgently demanded, so as to reduce the enormous expense of recruiting and promote the health, comfort and well-being of the labourers. Other planting districts have not the safeguards of Assam. It was only as late as December 28 last year telegrams from India called attention to the neglect of the roads in the Dooars, one of the most important tea districts in India. The particular road referred to is one which has occupied the serious attention of the Indian Tea Association both here and in Calcutta. It is clear to my association that, if this road is allowed to decay, it will be hardly possible to obtain any help for less urgent claims in other districts. The local district board has not

the means at its disposal, and the provincial funds have been depleted in the urgent need of the Supreme Government for pecuniary assistance; and the result is that the road, which has been a public road for many years. and on which depends the transport of millions of pounds of tea to Calcutta, is, it is rumoured, to be practically abandoned. The vital importance of this road to a small but increasing community by whose exertions wastes have been converted into gardens, is fairly set forth in the following resolution, passed at a meeting of the planters held on the 7th ult.: 'That the Nagrakata Road is one of the most important in the Dooars. It is the only means of communication with the railway station and the outside world for fourteen gardens with 10,800 acres under tea, producing over 70,000mds, or 5½ million pounds of tea annually, and giving employment to 20,000 coolies living on the estates; the road leads also to a Government bazaar, police station, and to several other bazaars, and there is a large community of resident native cultivators, shopkeepers, and others dependent upon this road for communication and food supplies.' The substitutes proposed are to maintain it as a cold weather track (the pressing need being for a road to carry the tea crop to the market during the season of heavy rains) and to construct a new and distant road outside the district and at the other side of dangerous rivers. What would the people of North Surrey say if their main road along the Thames were to be dismantled on the plea that a better road could be constructed on the other side of the Thames? Yet North Surrey has many alternative routes both by road and rail."

TEA AND MONEY.—The present mood of the investing public towards tea companies is distinctly favourable. Judging by the way the shares of one or two new concerns recently launched have been snapped up tea is very popular as an investment. The scarcity of investments other than these of the gilt-edge class naturally leads to a demand for anything of the industrial order that looks sound. As compared with the shoal of absolutely worthless rubbish that is handed to investors in exchange for their cheques, the shares of well-conducted tea concerns cannot fail to prove attractive.—*H. & C. Mail*, Feb. 7.

THE WYNAAD TEA ENTERPRISE.

The Pioneer Tea Company, favourable mention of which we made in our last issue, seems to stand an excellent chance of being successfully floated. A large number of shares have, we understand, been already taken up in Ceylon and elsewhere, and before long things should be in working trim. There is apparently a notion in Ceylon that the district is extremely unhealthy and labour very difficult to procure. The Wynaad may not be able to boast of a sanatarium climate like Ooty or Nuwara Eliya, but generally speaking we believe it is fully equal, if not in fact superior to any districts of like elevations in either India or Ceylon. Certainly it is very far from being so unhealthy, owing to its being so well opened out, as many "new" districts we wrote of. As to labour, there is never any lack of it in Wynaad the supply there being probably better than almost any district in South India. We would have not dwelt at such length on the matter, had we not good reason to believe that the above attempts to frighten off Ceylon capital, have been selfishly made by men who feared lest large extensions should raise the labour rates. However, it may quiet their fears to learn that to make assurance doubly sure, arrangements are being made to establish Labour Agencies in the Tanjore, Trichinopoly, Madura and Tinnevelly districts, from which parts Ceylon draws its labour. In any case the move is a wise one, and it goes without saying that if coolies in the above-mentioned districts will go to Ceylon, it may be taken for granted that they will go to the Wynaad, if work is offered them there. No one can more heartily desire to advance the prosperity of any planting district in South India than we do, and it is with pleasure that we publish these remarks to remove any erroneous impressions in Ceylon concerning the Wynaad, Ceylon capital and Ceylon energy, though perhaps over-praised in some quarters, will effect a great change for the better in South India. A yet more important point is that they will tend to bring us into much closer contact with home capitalists, who, we are glad to note, are now beginning to pay renewed attention to our planting industries.

In one of our Wynaad Season Reports last fortnight, the writer expresses a conviction that we hold the most depressing views on the capabilities of his district, and indirectly accuses us of being biassed against it. Strange as it may seem to him and others of his thinking, we have been under the impression that the praise we have consistently given the district to be as hearty and unstinted as its most ardent supporters could wish for. True, we have expressed our opinions strongly on the future of the tea market generally and the unwisdom of rash extensions. But we have as strongly insisted on the fact that South India generally, and the Wynaad in particular, holds a very strong position indeed in the matter of cheap production. It is to Ceylon that we must look for capital to be invested in tea, and the planters there are so intensely sanguine of the continued prosperity of the tea-industry, that it will need a far greater show of authority than we can possibly lay claim to, to shake their faith in the staple. If men wish, as so many do, to invest in tea, no district in South or Upper India offers more advantages than does the Wynaad, with its abundant labour, fertile soil, and—best of all—excellent communications. The Chairman of the District Association, the Hon'ble G. Romilly, in the report printed in this issue, again brings the question of central factories to the fore, and most wisely. The scheme has already been exhaustively treated in Mr. Standen's pamphlet, and at this juncture men who may be opening up their land independently of each other, would do well in lead to put into practice the method alluded to.—*Planting Opinion*, Feb. 15.

BEAUMONT TEA COMPANY, LD.

The statutory annual general meeting of the Beaumont Tea Co. of Ceylon, Ld., was held in the offices of the Company, 113, Queen Street, on 25th Feby. Present:—Messrs. F. H. Wiggin (in the chair), D. Michie, F. S. Rashleigh, B. L. Bremner, and the Eastern Produce and Estates Co., Ld.

Notice calling the meeting was read and the minutes of the extraordinary meeting of 6th Jan. were read and confirmed.

THE DIRECTORS' REPORT

was taken as read. It is as follows:—

The Provisional Directors have the pleasure to submit the Balance Sheet and Profit and Loss Account for six months ending December 31st, 1895. It has been decided that the financial and crop year shall commence on 1st January instead of 1st July. The Balance of Profit is, as shown in the accounts, R29,093·83. The Provisional Directors propose to write off one-third of the Preliminary Expenses, or R1,613·06; to declare a dividend at the rate of 5 per cent for the half year ended December 31st, 1895, absorbing R23,500 and to carry forward R3,980·77. The total tea crop secured from the Company's properties in the six months was 109,346 lb. and 49,747 lb. were made from purchased leaf, or in all 159,093 lb. The nett average realized including a portion estimated) was 9·96 cents.

The Company's property consists of the following, viz.:—

608 acres	Tea in bearing
122 do	Tea not in bearing
112 do	Fuel trees
10 do	Grass
322 do	Reserve and Waste
1,174 acres.	

The capital cost as per balance sheet per cultivated area in tea stands approximately R644 per acre. The estimate of crop for the year 1896 is 230,000 lb. tea exclusive of tea from purchased leaf. Negotiations have been opened for the purchase of Delta estate which, it is hoped, will shortly be completed; when the additional share capital (which has all been applied for) will be allotted.

The Provisional Directors retire in terms of the Articles Association, but, being eligible, offer themselves for re-election. The Shareholders will be requested to appoint an Auditor for 1896 and to fix his remuneration.—By order of the Directors, for the Eastern Produce & Estate Co., Ltd.

JOHN H. STAREY,

Manager, Agents and Secretaries.

On the motion of Mr. F. H. WIGGIN seconded by Mr. F. S. Rashleigh the report and accounts were adopted.

Proposed by Mr. MICHIE, seconded by Mr. BREMNER, and agreed to, that a dividend of 5 per cent for the half-year ending 31st December 1895 be declared payable on 27th inst.

Mr. F. S. RASHLEIGH proposed that Messrs. F. H. Wiggin, D. Michie, J. L. Anstruther, and F. Liesching be elected Directors. Mr. BREMNER seconded, and the motion was agreed to.

Mr. John Guthrie, on the motion of Mr. BREMNER seconded by Mr. RASHLEIGH, was elected Auditor at a fee of R50 per annum.

Meeting adjourned.

DIMBULA VALLEY (CEYLON) TEA COMPANY, LIMITED.

If there is anything to be urged in favour of the Dimbula Valley (Ceylon) Tea Company, Limited, it is the circumstance that the now too-usual, and objectionable, "waiver" cause finds no place in its prospectus; and we note, too, that particulars of the contracts which have been entered into appear to be fully set forth. It is impossible, however, for us to express a favourable opinion in regard to the general prospects of this Company. The Company, having a capital of £200,000, has been formed to acquire six Tea Estates situated in Ceylon. Four of these estates, valued at £93,500, belong to a Mr. James Sinclair, who is the Chairman of this Company, and he is, apparently, to receive payment for them principally in cash. The total amount to be paid for the six estates (and the greater part in cash) is £145,200. The present issue of capital being £150,000, this leaves but £4,800 cash in hand, or working capital, or whatever it is, for the Company. The prospectus states that this sum of £4,800 is for "the general purposes of the Company"; but when we find further on that, quite contrary to the usual practice, this unfortunate Company has to pay "the legal expenses, brokerage, and expenses attending the issue of the prospectus and allotment," we feel a little in doubt as to the amount of the balance that will eventually be available for those "general purposes." The prospectus contains a number of general and indefinite statements as to the present condition of the tea industry, and the prospective value of the estates to be acquired. We cannot fail to notice, however, the absence of any expert opinion in regard to the property to be taken over. We merely find it "estimated" that, if the estates produce a certain amount of tea, the Company will derive therefrom a certain amount of revenue, &c., &c. Such prophetic ambiguities fail to convince us. We are inclined to think that there is too much of the "vendor" element upon the Board of Directors of this Company, too much cash to be paid for the properties to be acquired. and too little cash provided to carry on whatever business the Company will get.—*Saturday Review*, Feb. 1.

UDUGAMA TEA AND TIMBER COMPANY, LTD.

At an extraordinary general meeting of shareholders of this Company held in the office of the Secretaries (Messrs. Mackwood & Co.) on the 26th Feby. the special resolution passed at a recent extraordinary meeting was passed. It is as follows:—

1. That the Directors be authorized to borrow money for the Company on mortgage debentures, and to that end to issue debenture bonds bearing interest at not more than 8 per cent. per annum for such ammounts as may be required for the purpose of the Company, but not exceding in the aggregate at any time One Hundred and Fifty Thousand Rupees (R150,000).

2. To authorizse the Director to lend money to the Company.

THE CASTLEREAGH TEA COMPANY.

The annual meeting of this Company was held on the 26th Feby. at No. 13, Queen Street, Colombo. The following report was submitted:—

The Directors submit herewith the Balance Sheet and Profit and Loss Account for the year ending 31st December, 1895, duly audited.

The balance of profit (including R4,860·37 brought forward, and after writing off for Depreciation of Buildings and Machinery as shown in the accounts) is R41,876·39. Of this sum R16,800 has been absorbed in paying an Interim Dividend at the rate of 7 per cent. The Directors propose to declare a further Dividend at the rate of 8 per cent. payable on the 28th February, absorbing R19,200, and to pay a bonus of 5 per cent. on the profit divided in the second half-year to the Superintendent, absorbing R960; and to carry forward to 1896 account R7,916·39.

The total tea crop was 200,000 lb., against the estimate of 130,000 lb. (increase in July to 180,000 lb.), the season having been very favourable, particularly in the early months. The cost of the tea delivered to buyers, or put on boardship, was 25·61 cents per lb. including all charges, or 24 cents exclusive of charges for depreciation of buildings and machinery. 187,585 lb. were sold locally, realizing 46·44 cents per lb., and 12,415 lb. shipped to Landon realizing 51·41 cents. The net value realized from sales was 46·74 cents per lb., leaving balance of gain 21·13 cents per lb. Cost in 1894 was 33·88 cents, and value 52·32 cents, per lb.

5 28·32 bushels of coffee were secured, which sol for R47.

The new machinery came into use in Februaiy 1895, since which time no scarcity of water for powe has been felt. The old pulping house has been adapted for withering leaf at a cost of R2,270·21. The old store now requires structural repair.

The cost of manuring carried to Suspense Account in 1894 is charged in the 1895 accounts, while a sum of R7,330·06 is reserved to be charged in 1896, representing unexhausted benefit from manure applied. Manure in small doses has been applied over about 143 acres with the object of promoting the growth where it was deemed advisable; the total area manured since the Company acquired the property being computed at 394 acres.

The Company's Property consists of:—

476 acres Tea under leaf. Yield in 1895=420 lb. Tea per acre.
50 do. Forest.

Total 526 do.

The estimated crop for 1896 is 180,000 lb. Tea.

It will be seen that the property representing Capial stands in the Balance Sheet at approximately R508 per

acre cultivated, as compared with about R502 in the previous year's account, and that the profit per acre is R84.

Mr. Villiers Alexander Julius resigned his seat at the Board on his departure from the Island, and the Directors elected Mr. Harry Creasy in his stead. Mr. John Helps Starey retires from the Board by rotation, and is eligible for re-election.

The Shareholders will be requested to elect an Auditor for the current year.

The report was adopted.

THE UNITED PLANTERS' ASSOCIATION OF SOUTHERN INDIA.

THE TRUST FUND.

The following letters from the Chairman and Mr. Granville L. Acworth on the subject of establishing a Trust Fund for the purposes of the Association have been circulated for general information:—

From W. H. Sprott, Esq., Chairman, United Planters' Association of Southern India, to the Planters of Southern India.

GENTLEMEN,—I have the honour to place before you Mr Acworth's letter with regard to the funds of the United Planters' Association of Southern India and to appeal to you for your support to place them on a sound financial basis. At present the funds of the Association are only sufficient to meet current expenses, such as Secretary's salary, printing, etc, and at the end of this year owing to expenses incurred in sending a Deputation to meet H. E. the Viceroy in Madras, there will be a probable deficit of nearly R800. As Mr. Acworth truly says, it is an unsatisfactory position for an Association representing such an enormous interest as ours does, to be in. We have started what Government now recognises as a powerful Association, and as the voice of the Planting Community, and now that we have it in our power to make our grievances heard with some chance of getting redress, it would be an eternal disgrace to the Planting Community, if they cannot raise sufficient funds to place the Association on a firm financial basis, so that it can meet all expenses, and be in a position to assume any line of action necessary for the furtherance of our interests. Government looks more and more every year to bodies like our Association, as the mouthpiece of the Community, and we should be throwing our chances away if we do not support the Association to the best of our ability. I appeal to you all, Gentlemen, for your generous support and must leave it to you, as to whether you will subscribe a lump sum or give an annual donation, and I hope that every proprietor in Southern India will come forward according to his means. At the next Meeting of the United Planters' Association of Southern India it will be decided how the fund is to be invested and Trustees appointed. Subscriptions will be received by the Honorary Secretaries of the various District Associations, or by G. L. Yonge, Esq., Secretary, United Planters' Association of Southern India, Madras.

From Granville D. Acworth, Esq., Honorary Secretary, Central Travancore Planters' Association, to the Members of the Planters' Association of Southern India.

GENTLEMEN,—I think it must have struck every Delegate present at the last annual general meeting of the United Planters' Association of Southern India, that the Funds of the Association were in a by no means satisfactory condition and that an Association such as ours, representing as it does several millions sterling of capital and an annual expenditure of about three quarters of a million sterling, should only be able to show a balance at the close of the year of something over R850. This matter was discussed by the Members of the Deputation to the Viceroy, after the business of the day was over, and I was asked by them to bring the question to the notice of the various Associations represented on the United Planters' Association of Southern India, to suggest some remedy. It will I think, be obvious to all that to raise the value of the subscriptions (or rather of votes) to the United Planters' Association of Southern India, is impossible, and that, even were it possible, the remedy would be insufficient. What we require is a fund amounting say, to about R200,000. which fund should be placed in the hands of Trustees appointed by the United Planters' Association of Southern India and invested by them, such part of the annually accruing interest as remains unspent at the end of the year to be also invested by the Trustees for the benefit of the Association. Money is power, and having such a sum at our command, we need never hesitate to undertake any action, such as sending a Deputation to the Secretary of State, which we consider as necessary to our interests. We might, and as a matter of fact it is our duty to, pay all the expenses of our representative on the Council of H. E. the Governor of Fort St. George. But there are half a dozen different ways, which will occur to any one, in which the Association might find itself at a disadvantage by not having a substantial income at its command.

Finally I think we might do something for our Superintendents. This of course is matter for future discussion, should the fund I speak of be established and assume reasonable proportions, It has however occurred to me that some scheme might be initiated by which any Superintendent subscribing to the fund a percentage of his income over a series of years, say 25 or 30 years, should at the close of that period receive a small pension, such as would at any rate relieve him from actual anxiety in the decline of life. The number of those coming to this country, who have no capital to invest and the great majority of whom will never be in receipt of such an income as will enable them without assistance to lay by a provision for old age, is annually increasing, and it appears to me to be the duty of proprietors many of whom are most prosperous, to aid these young men, if they themselves by their own thrift are willing to assist. This last scheme, I repeat, must be thoroughly threshed out and could not even be initiated until the Association has some capital at its back, but that it is capable of solution I have not the slightest doubt in my own mind. It now remains only to suggest the method, by which the sum I speak of should be raised, and it appears to me there are only two ways, one of these is, that proprietors should each of them pay down a lump sum, each man according to his means; that a register should be kept of all such proprietors as have subscribed together with the amounts thereof, and that any planter investing in the future should be appealed to for a subscription to the fund. A register could be kept by the Honorary Secretary of each District Association, who would forward a copy to the Secretary of the United Planters' Association, who would keep a complete register. By these means new proprietors could be at once identified. The second method is one which commends itself to my mind more than the former, for I think it likely would bring in more money, is that proprietors should be asked to subscribe an annual sum, until such time as the Association has a sum of at least two lakhs invested and in the hands of Trustees. In this case also a register should be kept and any new proprietor appealed to for a subscription over a series of years equal to those, through which the promoters of the scheme subscribed. In the event of the former scheme being adopted I am myself willing to pay a sum of £50 down. In the event of the latter I will subscribe R200 a year over a period of five years. I believe I am correct in stating that Messrs. J. G. Hamilton of South Mysore, G. Romilly of Wynaad, and W. H. Sprott of North Coorg, would lend their countenance to some such scheme as the above. I am also authorised by the Chairman of my own Association Mr. R. I. Imray, to state that he is willing to become an annual subscriber for a term of years. I do not in the least wish to suggest that either of my plans for raising a fund for the United Planters' Association of Southern India should be adopted if a better one can be found, but I am of opinion that such a fund should

be raised, and it rests entirely with the *esprit de corps* of our community, whether we are to go on as heretofore from hand to mouth, or whether we shall have such a sum at our backs as will free us for any anxiety in the future as to assuming any line of action we please for the protection or the furtherance of our interests.

INDIAN AND CEYLON TEAS.

One of the most striking episodes in the annals of modern commerce is the struggle going on between India and China for the tea markets of the world. In this connection, Japanese teas and the small supplies from other non-British sources are included under the general heading of China teas. One by one the markets of the world are falling down before the merit of India and Ceylon teas. As regards the markets of Great Britain, the fight has been already won by the India and Ceylon tea-growers, as the following figures will show:—During a period extending back thirteen years from 1894 China teas have been displaced in the British market to the extent of 76,000,000 pounds, and the price of the competing product has been reduced by nearly one-half. In 1881 the consumption of tea in Great Britain was 112,000,000 pounds of China teas, while in 1893 the consumption of those teas fell to 36,000,000. In 1881, 48,000,000 pounds of India and Ceylon teas were used there, while in 1893 the figures were 172,000,000 pounds. While the total British consumption of tea had increased by 48,000,000 pounds during thirteen years, the purchases of India and Ceylon tea increased 124,000,000 pounds, and the purchases from China decreased 76,000,000 pounds.

This great industrial revolution has been accomplished by an international rivalry almost without parallel. The Chinese and British growers have fought with all the characteristics of the two races. British enterprise has been met by Chinese persistence, and underlying it all the former has been fortified by the fact that the British-grown teas were of better quality. Machinery was introduced that enabled the India and Ceylon tea planters to do away with the hand-rolling process, the teas being manipulated by machinery, and when these facts, together, also, with the fact that no foreign coloring substances are used, were presented to the English tea drinker, and proven, it was only a matter of time when the efforts of the India and Ceylon planters to monopolize the British markets would be successful.

In every market where these teas have been introduced there has been a constant increase in consumption, and while in some it has been slow, largely from the fact that the people's taste has been formed upon the coarse leaf obtained from China and Japan, it has been gradual. The fine flavors of the India and Ceylon teas are a revelation to most persons when taken for the first time.

Next to Great Britain the United States are the largest tea purchasers in the world, and the fight successfully won in great Britain is now on here, and already great gains have been made. Purity and merit are the watchwords of the India and Ceylon planters, and in these days when food adulteration has gone to such an extent that the legislatures of the various states are constantly passing laws against such practices it needs no lengthy argument to prove that they must win.—*Grocer's Criterion.*

YATADERIA TEA COMPANY.

The seventh annual general meeting of this Company was held on the 26th Feb. at 13 Queen's Street, when the following report was submitted:—

The Directors have the pleasure to submit the Balance Sheet and Profit and Loss Account for the year ending 31st December, 1895, duly audited.

The Balance of Profit (including R19,782·97 brought forward from last year, after crediting Reserve Fund with R5,000 as voted at the last General Meeting; and after writing off for Depreciation of Buildings and Machinery as shown by the accounts) is R115,770·44. Of this sum R23,750 has been absorbed in paying an Interim Dividend at the rate of 12½ per cent., and the Directors propose that a further dividend of 12½ per cent. and a bonus of 20 per cent., absorbing R61,750, be declared and made payable on the 29th February; that R15,000 be transferred to the Reserve Fund account and that the remainder of R12,770·44 (after paying R2,500 special fee voted to the Directors at the General Meeting in 1893) be carried forward.

It will be seen that the property representing Capital stands in the Balance Sheet at approximately R255 per acre cultivated, as compared with about R266 in the previous year's accounts, and that the profit per acre is R137.

No new Factory buildings or Machinery have added during the past year, but it is intended in the present year to extend the factory, and to renew the Turbine and Sifters.

The total tea crop was 575,876 lb. or 25,875 lb more than estimated in the last report. The plucking area was 700 acres. The total quantity of Tea for disposal was 575,917 lb. including 42 lb. made from purchased leaf; of which 105,437 lb. were sold locally averaging 38·71 cents per lb., and 470,480 lb. were shipped to London, of which 147,425 lb. had still to be accounted for; but the average obtained for the 323,055 lb. as yet accounted for is 38·06 cents per lb. The cost of the Tea delivered to buyers or put on board ship, including all charges and Depreciation of Buildings and Machinery was 25·09 cents per lb. (being 1·62 cents more than in 1891.) The net value realised from sales (a portion being estimated), was 37·17 cents per lb. (being ·64 cents more than the previous crop). The sum written off for depreciation represents 1·18 cents per lb. of the cost.

The Company's property (including 60 acres purchased during the year) consisted on the 31st December 1895, of:—

Tea planted in.			Acres.	Yield of tea per acre in 1895.
1885	..	805 acres tea.	172	911
1887	..		208	819
1888	..		100	867
1889	..		43	872
1890	..		6	750
1891	..		52	928
1892	..		119	582
1894	..		68	not in bearing
1895	..		37	do do
			22	Cocoa and Factory site
			270	Forest, &c.
			1,097	as per last report.
			60	purchased from Crown and Natives.
Total	..		1,157	

Average yield from 700 acres 823 lb.

The Directors propose an extension of about 65 acres tea in 1896.

The estimated crop for 1896 is 626,500 lb tea.

Mr. David Fairweather retires from the Board in terms of the Articles of Association and being eligible, offers himself for re-election.

The Shareholders will be requested to elect an Auditor for the current year

The report was adopted and a dividend of 12½ per cent for the half-year and a bonus of 20 per cent for the year declared.

Mr. D. Fairweather having retired from the directorship, and being eligible for election, was re-elected a director, and Mr. J. Guthrie was re-elected auditor.

CENTRAL TRAVANCORE PLANTERS' ASSOCIATION.

From the proceedings of the annual general meeting, held on the 4th Jan., we extract the following :—

ANNUAL REPORT, 1895.

THE UNITED PLANTERS' ASSOCIATION, the importance and value of which we recognise more and more, held its Annual General Meeting in August. It is unnecessary to allude to the proceedings as they have already been laid before you. but there are two matters on which I would touch. The first of these is the funds of the Association. Everybody must admit that, for an Association representing some millions sterling capital and about three-fourth million sterling annual expenditure, these are in a most unsatisfactory position. It is likely that a scheme will shortly be laid before you to remedy this matter, and it is most earnestly to be hoped that all proprictors will come forward and give it their hearty support both materially and morally.

The second point is the Deputation to His Excellency the Viceroy on the subject of our labour laws and the amelioration therein we require.

It was most unfortunate that, just at this juncture, an irresponsible correspondence should have been appearing in the Public Press on the question of advances, some letters emphatically denouncing these as useless. His Excellency naturally laid great stress on the divergence of opinions on this point among planters themselves. Now Mr. Chairman, I myself, though I have taken some pains to make enquiries, have never met a planter of any experience who has not looked on advances as a matter of absolute necessity, and I am therefore led to believe that the assertions as to their inutility emanated from the younger portion of our community. I would do all in my power to encourage writing to the Press and nobody can begin too early, but we are none of us infallible, not even the youngest of us, and I would therefore urge those who are only beginning their career, not to dogmatise on matters of public interest, of which they are hardly competent to judge. I may add that my opinion on the question of advances is backed by the Committee whom I have consulted.

LAND SALES.—Another step forward this year was the re-institution after a lapse of nearly twenty years of Public Sales of Waste Lands, and it is much to be hoped that these will be continued, there being unbounded room in Travancore for the expansion of the Tea and Coffee Industries.

TEA AND COFFEE THEFT.—There is much to be desired as regards legislation in this direction, but we can expect nothing from H. H. Government until the Supreme Government has led the way.

LOCAL TEA SALES.—With unanimous consent Messrs. J. Grieve & Co. were appointed Sole Agents for the Association. These gentlemen have done much in exposing local traders making use of fraudulent marks and selling thereunder spurious teas purporting to be the produce of this district. I trust that tho arrangements now made will go far to check this trade

ESTATES ON ASSOCIATION.—All estates in the district have been borne on the roll of the Association in the past year, but it is very much to be regretted that no representative has attended from the Chenkara Group. These valuable and extensive properties have most unfortunately been placed under the charge of a writer, a fact to be deplored both in the interests of the Association and of the estates themselves.

INDIAN AMERICAN TEA FUND.—Members are to be most heartily congratulated on their response to the appeal made to them for this fund. Every estate and almost every Superintendent subscribed, and the Association which remitted the very substantial sum of R1,500 has again received the special thanks of the Indian Tea Association. The past year has seen an average decline of fully 1d per lb. in the Tea Market, and I would warn members that a recovery in the coming season is unlikely. Tho estimates for the year have not yet appeared, but there can be little doubt that, given favourable weather, there will bo an increased yield both from India and Ceylon. For this annually increasing production an outlet must be found. Mr. Blechynden, our representative, is doing admirable work for us in America, and his efforts are beginning to bear fruit; but to continue the campaign the sinews of war must be forthcoming, and I would therefore urge members by every means in my power to respond as liberally in the present season to the appeal that is certain to be made for funds as they have done in the past. It is practically a Life Insurance Fund, for on the success of the American campaign in a large measure depends our own prosperity, and after all the sum asked for from each individual estate is infinitesimal as compared with the interests at stake. It is satisfactory to note that coffee cultivation is again springing up in the district, and this too with every prospect of success. I heartily congratulate tho enterprizing gentlemen who have extended their operations in this direction. It only remains for me to thank you, Mr. Chairman, and the members of the Committee for the support you have accorded me in the past year.

I now beg to lay the accounts on the table and place my resignation in your hands.

GRANVILLE L. ACWORTH,
Honorary Secretary,
Central Travancore Planters' Association.

On the conclusion of the above, the Chairman said he wished, before moving the adoption of the Report, to say that he heartily concurred with every word that had been said by the Honorary Secretary on the subject of advances, that he considered somo form of advance absolutely necessary, and he would later, with the permission of the Meeting, move a resolution relating thereto. He now begged to move that the Honorary Secretary's Report be adopted and the accounts passed.

Carried *nem. con.*

The CHAIRMAN, who signed his intention to decline re-election, and the other officers having resigned, Mr. Goldie was requested to take the chair *pro tem.*, when the election of officers for the current year was proceeded with. The result of the ballot was :—

F. M. Parker, Chairman; G. L. Acworth, Hony. Secy.; S. M. Dighton, R. H. Goldie, and R. S. Imray, Committee.

Mr. DIGHTON, in moving a vote of thanks to the retiring officers, congratulated the Association on its strong position and vigorous life, asserting that it had done more good in the past two years than in the whole course of its previous existence. Mr. Laurie seconded the resolution, which was carried unanimously.

Proposed by Mr. IMRAY, seconded by Mr. GOLDIE, "That this Association endorses the resolution passed by the Wynaad Association, and considers some form of advance as necessary to the existence of our industry."

Carried *nem. con.*

FIRE INSURANCE ON TEA FACTORIES.—The HONORARY SECRETARY drew tho attention of tho Meeting to the fact that the principal Insurance Companies in London had raised the rates of premium in S. India to what he himself could not but think was an unjustifiable extent, a well-equipped factory now costing some Re. 1-4 to Re. 1·6 per cent. per annum. There was considerable discussion on the subject which, on the motion of Mr. IMRAY, it was eventually agreed to refer to the Committee, who should have full power of action.

Resolved that the subscription for the current year be at the rate of 2 annas per acre.

Mr. ACWORTH reminded members that he had given notice that he would call attention to Mr. Knight's suggestion, that this Association should amalgamate with that of South Travancore. For his part he was strongly opposed to the idea. In the first place the Association was quite strong enough to stand alone, and he thought the argument that it would be to its interests to havo a Secretary in the Capital would not hold water. The Association was much more likely to keep in touch with H. H. Government by communicating with that Government direct than by doing so in a roundabout way through a paid Secretary in Trevandrum. Moreover the Association had the advantage of the presence of the British Resident

in its hills during three months of every year, and it could always go to him for advice or support. Secondly, he could not see the advantage of having a United Association of Travancore, when there was a United Association of S. India. Like the gilding of refined gold, it was "wasteful and ridiculous excess." The U.P.A.S.I. would always accord this Association its hearty support, and with far more likelihood of success than even an amalgamated Association of Travancore would have.

Mr. DIGHTON backed Mr. Acworth's views, and Mr. IMRAY, in doing the same, said he thought it a pity that the Travancore Association did not style itself the South Travancore Association, the former name being suggestive of its representing the whole planting industry of the State, which was not at all the case and exceedingly misleading, and was by no means to the interests of the planting community in general. Why minimise the importance of the country? It was to the advantage of the planters of Travancore that the country should be thought of as one of importance and size, as it deserved to be, and this would be more likely to be achieved, were the three Associations respectively called "North Travancore," "Central Travancore" and "South Travancore" in lieu of "Kanan Devan," "Central Travancore" and "Travancore" as heretofore. "Kanan Devan" conveyed nothing to the minds of most people, whilst "Travancore Planters" conveyed a decidedly false impression. After one or two remarks from other members, it was unanimously resolved that the Association remain independent.

INDIAN TEA ASSOCIATION.

The following interesting figures have been placed at our disposal by the Secretary of the Association:—

In their Circular of the 7th October 1895, the General Committee reproduced the original estimate of the Indian Tea Crop in the following figures:—

ORIGINAL ESTIMATE OF CROP OF 1895.

	lb
Assam	57,531,490
Cachar	19,405,880
Sylhet	22,272,900
Darjeeling	8,069,210
Terai	3,176,000
Dooars	19,854,240
Chittagong	842,000
Chota-Nagpore	238,800
Kangra	3,000,000
Dehra Dun and Kumaon ..	2,000,000
Private and Native Gardens ..	4,000,000
	140,390,520

They also published a revised estimate based upon actual results to the 31st August as follows:—

	Manufactured to 31st Aug. 1894. lb	Manufactured to 31st Aug. 1895. lb
Assam ..	32,987,585	34,286,191
Cachar ..	10,783,203	10,332,442
Sylhet ..	10,695,213	11,967,318
Darjeeling ..	5,164,574	6,089,418
Terai ..	2,004,966	1,707,738
Dooars ..	8,983,916	10,802,538
Chittagong ..	459,257	361,759
Chota-Nagpore ..	91,061	131,131
	71,169,775	75,678,535

REVISED ESTIMATE OF CROP OF 1895.

	lb.
Assam	56,874,241
Cachar	17,421,950
Sylhet	22,910,208
Darjeeling	8,479,854
Terai	2,472,116
Dooars	20,041,489
Chittagong	921,746
Chota-Nagpore	203,360
Kangra	2,808,000
Dehra Dun and Kumaon (Estimate)	2,000,000
Private and Native Gardens (do.)	4,000,000
	138,135,964

The Committee have now the pleasure to give you the figures showing the actual outturn of the Indian Tea Crop of 1895:—

ACTUAL OUTTURN OF CROP OF 1895.

	lb.
Assam	55,604,187
Cachar	17,543,622
Sylhet	22,223,798
Darjeeling	8,257,179
Terai	2,513,938
Dooars	20,090,427
Chittagong	798,768
Chota-Nagpore	261,143
Kangra	2,186,000
Dehra Dun and Kumaon (Estimate)	2,000,000
Private and Native Gardens (do.)	4,000,000
	135,479,062

The total shipments to all places from 1st April to 31st January 1896 are 128,303,860 lb. The exports to the Colonies and other Ports together with local consumption are not likely to exceed 14 millions which will leave about 121¼ million lb. for export to Great Britain.—*Indian Planters' Gazette*, Feb. 15.

VARIOUS PLANTING NOTES.

WOODS SUITABLE FOR TEA CHESTS.—On pages 588-591 we publish the translation of a paper by Mr. A. E. Kerkhoven of Java, on "Varieties of Wood More, Less, or Not Suitable for Tea Chests." This, though referring specially to the trees grown at an elevation of 3,000 feet in the Preanger regencies of Java, will be found useful by Ceylon planters; and it might be well worth while to introduce those trees favourably spoken of that do not at present exist in Ceylon.

WYNAAD PLANTERS' ASSOCIATION.—As will be seen from the extract which we publish elsewhere a change has taken place in the Secretaryship of this Association, Mr. J. W. Hockin having been appointed to the office in succession to the Hon. Mr. Romilly, the Planting Member of Council, who had held it for a period of seven years and performed the duties thereof in a manner which elicited highest encomiums. Mr. Hockin has also been nominated as Planting Member, and in the event of another member being appointed by Government the Association has recorded its desire to nominate Mr. H. P. Hodgson.

LAND JOBBING.—The introduction of sales of waste lands in the Dooars is not at all favourably regarded by the planters there, as being likely to bring land-jobbers on the scene. The system obtains in Assam, but there the planters have this safeguard that competing applicants must apply before the issue of the notification of sale, whereas in the Darjeeling and Jalpiguri districts it is proposed that if there is more than one application before the *date* fixed by notification for the sale of lands an auction must take place. In other words—says our Allahabad contemporary—the planter who has been at all the pains to prospect good land has no protection against the unscrupulous jobber. The latter sits at his ease waiting until a notification of sale is issued; he then sends in an application with a trumpery fee of R5; and he is entitled to bid against the man who has been at heavy expense in surveying and examining a promising area. The jobber may offer to withdraw for a consideration, and if this be not given he may bid up the land in sheer malice. The *bona fide* investor, who may not have had experience in prospecting, can also wait his time and outbid the unlucky planter.

THE JAPAN TEA PLANTATIONS.

(BY Y. OBAYASHI, OF TOKYO.)

The tea production of Japan amounts to 62,836,892 pounds and this tea is grown on plantations scattered within the limit of 31 deg. 20 min. to 41 deg. 30 min. N. lat., namely, from Chiran of Kagoshima to Matsumaye of Hokkaido. Though young buds can be plucked from the tea tree in the cold region as far as Hokkaido, yet it is an evidence of unnatural growth. The true limit of mercantile tea production may probably be 36 deg. 30 min. (the upper part of Ibaraki prefecture). In the upper region, or above 36 deg. 30 min., there are very few plantations, which only supply the local consumption and produce 2,047,486 pounds, or 3 per cent. of the entire production of Japan tea. In the middle part of the island there are three or four tea districts, of which thd Uji region is the widest and most famous. Next to Uji is the Shidzuoka district, and next to that is the Sayama tract. In the Uji region there are Kyoto, Shiza, Nara and Miye prefectures of large production. In the southern part there found in abundant profusion wild tea bushes among the hills or forests. For those who would be more conversant in regard to the Japan tea districts I have grouped the tea districts according to latitude as shown in the following table:

	above.	m. N. lat.	Production.	per ct.
1 Plantations ..	36d	30	2,047,486 lb.	3·2
2 Plantations ..	35d	20	5,677,250 lb.	9·3
3 Plantations ..	34d	0	41,529,153 lb.	16·0
4 Plantations ..	33d	0	8,084,387 lb.	12·8
5 Plantations ..	31d	20	5,498,616 lb.	8·7

According to this classification the Sayama tea belongs to the second group, and in the third there are Shidzucka and Uji.

It is well known that the crop tea per acre is very heavy, though the climate is colder than the regions of China or India. Every farmer knows how to cultivate tea with the aid of manure, but does not know how to get the best results without the manure. Every tea man knows that the tea leaves picked from the manured trees are rich in aroma and taste, but does not know how to produce fine tea from unmanured plantations. From a single acre there is sometimes obtained a crop of 2,083 pounds. The yield of the May and summer crops frequently amounts to 1,000 pounds in Shidzuoki, Uji, Miye, Sayama, etc. But as to the average it is far below as shown in tbe following table:

	Tea Acreage.	Pounds per acre.
1 ..	11,650	175
2 ..	28,110	202
3 ..	76,436	542
4 ..	21,953	368
5 ..	11,300	487
Average ..	——	417

As to the flavour, tea raised on manured grounds is ranked first of all. As an example we have ceremonial tea, or the tea of Chanoyu, obtained from heavily manured gardens. Again Gyokuro tea (having high value) is also produced upon heavily manured land. Japanese gentlemen of and above the middle rank always use Gyokuro ($2·00 per pound); therefore, they know the actual cost and pure flavour of Japan tea. I feel very sorry that your countrymen serve only inferior variety and cannot use the finest tea of Japan such as Japanese gentlemen consume. The American Consul at Amoy about 1892 said that among Formosa Oolongs there is found tea of very high value, and also in Japan, where a pound of Gyokuro, costing above $10·000, may be brought in the large cities of the empire.—*Planter.*

MADRAS TEA SEED FOR CEYLON.—A Madras contemporary states:—"The Director-General of Statistics has requested the Madras Government to furnish his office with figure showing the quantity and value of tea-seed exported to Ceylon from the Madras Presidency during 1894-95 and first nine months of 1895-96, and that these particulars may, in future, be furnished monthly."

CEYLON HILLS TEA ESTATES CO. LTD.

An extraordinary general meeting of shareholders of the Ceylon Hills Tea Estate Co., Ltd. was held on Feb. 25th at Messrs. Bosanquet and Co.'s office, Chatham Street.

The meeting was held to consider the purchase of further estates, to increase the capital of the Company, and to authorise the Directors to raise money by issue of debentures.

There were present Messrs. J. F. Traill, G. C. Walker, F. Liesching, W. W. Kenny, Delmege, Reid and Co., (by Mr. Kenny) Misses. Henderson by Mr. J. B. Henderson. Mr. Traill was voted to the Chair. Mr. WALKER moved that the proposal to purchase Lammamoor estate from Messrs. Perry and Albrecht for £2,800, Mr. H. Perry taking R5,000 worth of fully paid shares ranking for dividend from 15th February 1896, in part payment, be approved.

Mr. FRANK LIESCHING seconded and it was carried.

Mr. WALKER moved that the proposal to issue 200 fully paid shares ranking for dividend from 15th February 1896 in part payment of Lammamoor estate be approved.

Mr. KENNY seconded, and it was carried.

Mr. KENNY proposed that Agra Oya estate be purchased from 1st April 1896 for £10,000.

Mr. LIESCHING seconded, and the motion was carried.

Mr. WALKER proposed that Rawley, Fawnhope, and Donhead estates be purchased for R60,000 on 1st April 1896.

Mr. KENNY seconded, and the motion was carried.

Mr. HENDERSON proposed that the Directors be authorized to issue not more than 4,050 fresh shares of R100 each, in such manner, time, and terms as the Directors may determine.

Mr KENNY seconded, and the proposal was carried.

Mr. LIESCHING proposed and Mr. Traill seconded that the Directors be authorised to raise money for the Company on mortgage debentures at a rate of interest not exceeding 7 per cent, and to an amount not exceeding half of the called up capital of the Company.

Mr. TRAILL seconded and the motion was carried.

With a vote of thanks to the chair proposed by Mr. LIESCHING the meeting concluded.

THE PROPOSED TAX ON TEA IN THE UNITE STATES.—The Washington correspondent of t h *American Grocer*, writing on Jan. 21, says:—

I described in my dispatch of last week the opening of the fight for pure tea, and I am now able to state that within a short time a bill placing a tax of from 10 to 15 cents per pound on all teas will be introduced. It is possible that the friends of this measure will delay action, in order that their course will not seem to complicate the tariff situation as long as the Dingley bill is pending in the Senate; but as soon as the tariff bill is out of the way, the tea bill will be brought forward. The measure which Representative Cummings introduced last week, and the text of which was printed in the *American Grocer*, provided a tax of 10 cents per pound on those teas only which are transhipped on their way to the United States. This bill will give way to the new one as soon as the latter is introduced. It is estimated that at 10 cents per pound the revenue for the first year would exceed $10,000,000, and would steadily increase thereafter, for it is the experience of foreign countries that improvement in the quality of the tea imported is followed by a large increase in consumption.

MR. TOM GRAY ON TEA IN AUSTRALIA.

Mr. Tom Gray returned this morning by the ss. "Massilia" from his trip to Australia, which he very much enjoyed, having found everyone most kind and hospitable. He visited the Blue Mountains, Mount Victoria, Jenolan Caves, &c., and was charmed with the scenery. But Ceylon tea, Mr. Gray says, is not being properly pushed in Australia. It is used chiefly for mixing purposes, and so simply acts as a vehicle for the sale of rubbish. The Planters' Association Committee should see to this.

THE TEA MARKET.

Rules firm for British grown, but China still recedes as regards home consumption, though this is the cheaper market whence shippers can supply their requirements than from China. Yet the trade with this country could be resuscitated if our requirements were more studied. A future for China (Formosa) Teas now lies with the Japanese in their acquisition of that Island. It produces the finest flavoured, and is capable of easily putting 50,000,000 lb. on the markets of the world. With increasing consumption it would find an outlet.—*L. and C. Express*, Feb. 7.

QUEENSLAND COFFEE GROWERS' COMPLAINTS.

When we find experienced coffee planters complaining of the apathy displayed by the Government in not giving more assistance in the shape of expert teaching, it is not to be wondered if the willing but uninitiated growl somewhat loudly. In addition to the two papers on coffee culture which appear in this issue, we have a communication from another constituent who has been struggling for over fourteen years, endeavouring to grow a payable crop. Although having spent thousands of pounds experimenting with coffee, he still persists in going on. Any one capable of forming an opinion will agree with us in believing that Queensland is destined to come to the very forefront as a coffee producer. Looking at the vast importance which the successful cultivation of this crop will add to the welfare of the colony, we cannot but express the opinion that neglect of a glaring character has been shown. Unlike many other crops, coffee can be grown over a very wide extent of country. The number of growers in the colony certainly warrants the introduction of an expert, so that valuable time and large sums of money be not needlessly wasted. There are other crops lying at the very threshold in the establishment of important industries, which are quite in the same category with coffee, but of these we have before spoken. The wine and tobacco industries are both in a most unsatisfactory condition for the want of technical knowledge in particular branches. The same with coffee. The proper machinery for manufacture is not available, and yet the Government are desirous of seeing the plant universally grown. Assistance has been given of a most substantial nature to the sugar, and to the dairy industries, and that assistance has been the means of resuscitating and prolonging the life of the one and of stimulating and placing the other in a position to come into contact with the outside world without fear of extinction. The cultivation of such crops as coffee, which, according to the ideas generally inherited by the average Australian, requires more than book learning, or even more than a mere putting-of-the-shoulder-to-the-wheel sort of teaching, and should not be left entirely to experimental training. We have always believed the Department of Agriculture to be thoroughly in earnest in their endeavour to do the best that lies in their power to assist the cultivators of Queensland, but the importance of agriculture has never as yet been recognised by the responsible authorities as it soon will and must be. The constituent referred to in our opening remarks is a gentleman of more than ordinary intelligence, and is a thorough believer (as may be readily credited) in Queensland as a climate second to none for coffee growing. He is one of the few who have yet succeeded in overcoming all the difficulties attendant on the proper preparation of the coffee bean for market. We are quite at one with our correspondent in thinking that the Government should, without further delay, import the latest and best machinery and give them in charge of an expert, who could visit the various coffee centres for the purpose of instructing growers in that most important of all subjects to coffee growers, viz: What to do with the crop after it is ready for plucking? We hold an opinion of our own that a coffee grower should not be a coffee manufacturer, but there are certain early stages in what some might call the manufacture of coffee which can best be done by the grower. It is about high time to speak out when we find so many of our most enterprising and valuable settlers disturbing their very wits in order to discover a way out of the difficulty of preparation, by inventing rude makeshifts of their own. The terms sugar planter and coffee planter generally infer that there is wealth behind, but, many of our best coffee enthusiasts have only small capitals on which to work. We trust the matter will be taken up by the proper authorities as the industry is fast assuming an importance which must be recognised.—*Queensland Manufacturer*, Jan. 25.

INDIAN PATENTS.

Applications in respect of the undermentioned inventions have been filed, under the provisions of Act V of 1888.

FOR IMPROVEMENTS IN APPARATUS FOR ROLLING TEA-LEAF AND THE LIKE.—No. 38 of 1896.—William Jackson, of Thorngrove, Mannofield, Aberdeen, North Britain, engineer, for improvements in apparatus for rolling tea leaf and the like.

FOR A TEA SIFTER OR SORTER FOR THE SORTING OF GREEN OR "CUTCHA" TEA LEAF.—No. 41 of 1896, Henry George Hills, tea-planter, at present manager of the Silcoori Tea Estate, residing at Silcoori, in the district of Cachar, under the commission of the province of Assam, for a tea sifter or sorter for the sorting of green or "cutcha" tea leaf.

BRITISH CENTRAL AFRICA.

In an interview published in a late issue of the *Bombay Gazette*, Mr. Rhodes Morgan, Deputy Conservator of Forests—so well-known amongst Nilgiri sportsmen—gives a very depressing account of the resources of Central Africa. Mr. Morgan has just spent some eight months in the country and his views should be of value. *Imprimis* comes the assertion that fever of a very virulent type is prevalent all over the country, "blackwater" fever being the most fatal. Dysentery was also common among Europeans and Natives alike. As to the commercial side of the question, Mr. Morgan states that the prospects are very poor.

NATURAL PRODUCTS.—The natural products of the country were few. India-rubber is to be found, but the natives spoil the vines as they do not know how to extract it. Another product is strophanthus, which is used in the cure of affections of the heart, but this market is very easily glutted and it does not fetch good prices, the supply being greater than the demand. Ground-nuts are cultivated to a very small extent by the natives. With regard to ivory the elephants are being killed off—day by day. If there were any elephants, they were mostly in Portuguese territory. Now and again some small herds might come into inhabited tracts, but as soon as a European or a Native heard of it, he immediately

went ont to kill them. A large species of Sorghum, known as Mapeira, also grew and attained a height of about 14ft. Some species of Indiancorn, cucumbers, pumpkins, and tobacco were available. No other vegetables were grown there. Tobacco was grown only to a limited extent for the consumption of the natives. Ground nuts and gingelly oil-seeds were also obtainable. Castor-oil was not cultivated, although it grew luxuriantly in the wild state. Near the houses, Cassava is a good deal planted. Fruit trees are not grown anywhere, but a few lime and orange trees are found in one or two places. The valley of the Shiré River is extremely fertile. The soil is annually enriched by the inundations during the rainy season, and several crops are reaped in succession from these alluvial lands after the subsidence of the floods.

GOLD SPELLS RUIN TO COFFEE.—Then with regard to gold there were three companies who were now prospecting for the metal in British Central Africa. If gold was discovered, then the country must at once develope, and the wages of labourers go up. But, on the other hand, the coffee industry would be almost ruinod by the discovery of gold; because the *Kaffirs* working on coffee plantations receive only a rupee and a half per month, where as the labourers working in gold mines were paid from three to four pounds. If gold was found in British territory, coffee plantations would cease to attract the labourers, nor would it be profitable to the planter himself in view of the increasing wages he would have to pay to the labourers, and therefore the industry would inevitably decay. African coffee was superior to Indian, and brought better prices in the London market. The labourers working in the mines at Johannesburg receive £3 or £4 per month as against only one rupee and a half in British Central Africa for working on coffee estates. Therefore, natives from places like Senna on the river Zambezi and Mashonaland and Beira went Johannesburg to work in gold mines; and there was no manner of doubt that this tendency to desert the coffee fields would be increased by the discovery of gold in the protectorate. Even at present coffee-farming was not an easy task.

DIFFICULTIES OF PLANTERS.—It was impossible to get manure because in the first place cattle was very expensive and most of them which were found near lake Nyassa died from cattle disease. Artificial manure was also quite out of the question, because the cost of freight was very high. The difficulty of navigating the Zambezi river was great, and the cost was absolutely prohibitive, being £6 from Chindé to Katungas, although the distance between the two places is not more than 360 miles. Again there is another most discouraging factor. Longicorn beetles are very common in the Mlanji coffee district. They live upon the roots, and they destroy about fifty per cent. of the coffee plants, in which they lay their eggs. Again the soil in the Mlanji District and over the Shire Highlands has greatly deteriorated on account of the system of cultivation adopted by the natives. It is similar to that which is called Cheena in Ceylon and *Koomree* in India. Again, humus or surface soil is frequently washed away by the water, and the soil is greatly impoverish d in consequence. After relating various other causes for the impoverishment of the soil and the deterioration of crops, Mr. Morgan observed that in certain Districts of Natal and German East Africa leaf disease exists, and said if it once got into Central Africa it will absolutely ruin the coffee estates.

COMMUNICATIONS.—As to the future prospects of the country, Mr. Morgan referred to the projected railway to Blantyre for the development of the resources of the country. New roads were being made from Chiromo to Blantyre, but whether railway enterprise would be successful was quite a different matter. For his part he did not think that the railway would be a success there because there were not sufficient products in the country. If the coffee plantations ceased to exist there would be nothing in the country to be transmitted by rail that would pay. The protectorate was not at all adapted for colonisation by Europeans on accounts of its extreme unhealthiness.

Readers must, however, bear in mind that Mr. Morgan visited the country for sport, which apparently from his scornful remarks on the butchery of game by Europeans and natives alike, he did not find. His ill-success may possibly have biassed his judgment on the economic advantages of the district. * * *

Last of all, as a sort of *bonne bouche* (!) we give the following extract from the Calcutta *Planter*:—

A private letter from a friend in the coffee region of East Africa bears unexpected testimony to the fact that the early, and seemingly incredible, trials of planters in India are now being endured with unconquerable determination by Scotsmen and Englishmen in the Dark Continent. The writer says that he never saw Europeans in a more miserable condition. Having no connection with the authorities, and being there simply to stake their lives on coffee, several Scotsmen are living in the most veritable native huts, with boards to sit on and eat off, with scarcely a change of clothing—one was actually shirtless owing to some exigence of life out there—and with nothing to read and nothing to do accept to watch their coffee. Locusts come up and eat the seedlings, when the men patiently sow the field over again. More than one planter have sown their fields thrice in the last season. Such men will succeed, or be followed by others who will succeed. They are the sort who have made India what it is, and who alone can carry it on as it is.—*Planting Opinion*, Feb. 15.

TEA IN AMERICA.

NEW YORK Jan. 29th.

Buyers have the advantage on nearly every grade but the better sorts of Formosa Oolong. The demand is slow—in fact, ultra conservative. Japans are weak, and despite low prices of other sorts, the market droops, droops, droops. Cause: Too much trash. India and Ceylon sorts steady.

Today at noon the Montgomery Auction and Commission Company will sell 12,132 packages, viz.: 2,693 half-chests Moyune, including desirable chops; 4,093 half-chests and boxes Pingsuey; 234 half-chests Japan; 93 half-chests Japan, basket-fired; 1,530 half-chests Congou; 35 boxes scented Capers; 78 packages India, Java and Ceylon; 1,163 half-chests Foochow, new crop; 2,213 half-chests and boxes Formosa, including new crop.—*American Grocer*.

DRUG REPORT.

(From the *Chemist and Druggist.*)

42 Cannon Street, E.C., Feb. 6.

ARECANUTS —Sixteen bags sold at unaltered prices—viz., from 10s for damp to 11s 6d per cwt. for sound quality.

BAEL-FRUIT.—Two cases of whole peeled fruit from Bombay were offered; the appearance was good, but owing to the neglected state of the market the parcel only realised 1d per lb.

CALUMBA. Of 114 bags, imported *via* Bombay and Hamburg, 5 of ordinary dark quality sold at the low figure of 9s per cwt.

CROTON-SEED easier. Twenty bags of rather dark seed from Colombo realised from 40s to 41s at today's auctions.

OILS (ESSENTIAL). Citronella oil is quiet; two drums shown at auction were bought in at 2s 2d per lb., but no bid of 2s per lb. could be obtained. The quotation for arrival is 1s 9d per lb. c.i.f., shipment within the next six months. Cinnamon oil was bought in at from 1s 8d per oz down to 9d per oz. Three cases leaf oil were bought in at 5d per oz.

GRAPES GROWN IN COLOMBO.—Mr. C. Drieberg has shown us the firstfruits of the vine-growing experiment at the Agricultural College, in the shape of some dozen small clusters of grapes, mostly white ones, but a few of a red variety. These are from vines only eighteen months old, and only six months in Ceylon! The fact is, however, that the heat of Colombo has caused the grapes to ripen too rapidly. Nevertheless, considering the poor soil in which they were grown, and other drawbacks, the result is astonishing, and gives good hope of the success of Mr. Zanetti's experiment.

PICKINGS WITH A LOCAL APPLICATION.

The following reference to the late Editor of the *Ceylon Observer* is from the proceedings of the Agri-Horticultural Society of Madras and is taken over in the *Kew Bulletin* of October last: The cultivation of Liberian Coffee was strenuously advocated in Ceylon by the late Mr. A. M. Ferguson, C.M.G., who published at Colombo an excellent "History of the Introduction and Progress of the cultivation up to 1878." It however made little progress owing to its unsuitability for the "topping treatment" which the Ceylon planters had been in the habit of applying to Arabian coffee, and latterly owing to the superior attractions of tea.

Haberlandt's "Tropenreise"—to judge from the review of the work in "The Forester" (New Jersy)—would seem to be a most exhaustive and entertaining book, containing graphic accounts of Tropical Vegetation particularly as seen in the Indo-Malasian Peninsula. On his return journey Dr. Haberlandt spent a few days in Ceylon before leaving for Egypt.

A correspondent of the *Indian Agriculturist* (who is careful not to reveal his secret) writes as follows on the subject of clearing for tea planting:—

It has always been a wonder to me why tea-planters ever spend any money on their jungle clearing, instead of making it yield them a large profit in the very first year, and also, probably, so prepare the soil of the new clearing that the growth of their now tea would be more advanced than it is by their present method. I have seen the simply marvellous effect of the method I have in view on a rice crop grown on such a clearing. I do not insist that the effect will be the same on tea, the plants being so very different; but it is just possible that it might be. At all events the new tea land would be not only cleared at no expense, but would also yield a large profit in the first year, which gain would go towards lessening, perhaps entirely covering, the expenses of the new tea extension. The outlay on jungle clearing is, as now done, unavoidable, so it ought to be worth the planter's while to try if it is not possible to avoid it, in these days of heavy labour difficulties and expenses. If any planter has any curiosity about the matter and the enterprise to try the experiment on his next small clearing job, I shall be most happy to give him all the information in my power, and should be delighted if my suggestion turned out a success, and feel proud that I had introduced a profitable new idea into Assam.

The name and address of the writer, which our tea-planters may be anxious to know, is Bukit Gantang (Larut).

The average consumption of tea in India is only one-fortieth of a pound per head of population. In England the consumption needs five pounds per head.

Veterinary-Major Kemp's report to the Indian Government makes the following reference to the Indian butter trade. "Dairy enterprise in India has been rapidly taken up and the market is now almost overstocked with butter of all kinds and qualities. The modern dairy machinery we presume, facilitates matters considerably, but it also assists to deceive the public. Now it some times happens that milk and butter are bought from a dairy where, in many instances, not a single cow or buffalo is kept. The milk is purchased from the bazaar *Gowala*, who obtains it in precisely the same manner as before from ill-fed or diseased cows. The milk is exposed to a vitiated atmosphere, kept in dirty vessels, and frequently mixed with polluted water. From this milk, butter is made, and although perhaps more attractive to the eye and taste is still no less dangerous."

Says the *Indian Agriculturist*:—

Divi-Divi is of immense value in tanning, dyeing, and for making ink; for each of these purposes the pod, or bean, is used. Divi-Divi contains a very large percentage of tanning. Used in tanning this product accelerates the process, and gives to the leather a clean, healthy appearance. The Divi-Divi tree thrives on any soil from the sea level up to some two thousand feet above. It is imported into India chiefly from Maracaibo, Paraiba, and St. Domingo, but it is under cultivation in many other places. A large plot of land near Madras is now under cultivation, with excellent prospect of success.

An article on the "Advance of Chemistry" in the *New Orleans Times-Democrat* refers to Vanalline as the greatest success in artificial flavouring, and remarks that this product is keeping down the price of vanilla beans, and it is likely to drive the latter out of the market. Already the chemists are manufacturing oil of banana, oil of pineapple, oil of pear, oil of apple, oil of raspberry, and many others. The essential oil of banana obtained by distilling the fruit, is identical chemically with the laboratory product. Oil of banana is a compound of acetic acid and amyl alcohol, the latter being the chief constituent of fused oil. Oil of bitter almonds has been counterfeited; though chemically different, it has the same flavour as the real. The chemists now know how to counterfeit lactic acid, which is the sour principle of sour milk. They also make citric acid, which is the sour of the lemon. A recent achievement of great importance is the manufacture of salicylic acid from carbolic acid. One of the best remedies for gout and rheumatism is salicylic acid; also it is useful as a preservative. Formerly it was obtained from the wintergreen plant and from certain varieties of willows, and it was very costly. At present it is made by the ton, and is extremely cheap—too cheap in fact, inasmuch as it is freely employed to give a better keeping quality to bottle and otherwise preserved foods. It kills the bacteria that produce decomposition, but in the stomach it destroys the digestive ferments, and on that account it is injurious to health.

The Botanical Department, Jamaica, in a bulletin referring to coconut cultivation, refers as follows to the method of treatment adopted in Bombay:—

It is calculated that in India there are 480,000 acres under the coconut, and the cultivation is attended to carefully. In Bombay, for instance, after the seedlings are planted out, they are watered every day or two for the first year, every two or three days for the second and third years, and every third day for the fourth and fifth year. "During the rains, from its fifth to its tenth year, a ditch is dug round the palm and its roots cut, and little sandbanks are raised round the tree to keep the rain-water from running off. In the ditch round the tree, 32 lb. of powdered dry fish manure is sprinkled and covered with earth, and watered if there is no rain at the time. Besides fish manure the palms get salt mud covered with the leaves of the croton-oil plant, and after five or six days with a layer of earth; or they get a mixture of cow-dung and wood ashes covered with earth; or night-soil, which on the whole is the best manure." (*Watt's Dict.*)

In the same bulletin we read:—

In the tropics of the old world generally, it is customary when the plant is one year old to dig round the roots and apply ashes once a month; when the tree is two years old to open up every year at the beginning of the rains the roots to a distances of 4ft. to 6ft. from the stem, to apply ashes and dry manure to the roots, and leave the opening until the end of the rainy season, then to fill in again the soil which had been removed, and level the ground. During the time the roots are exposed, the older worn-out rootlets may be cut away and the roots of other plants removed.

Correspondence.

To the Editor.

RUBBER CULTIVATION IN CEYLON: CAUSE OF ITS FAILURE.

Powis Place, Queen Sq., London, 31st Jan.

Dear Sir,—Much obliged for paper. I think you must attribute the failure of the Rubber Enterprise in Ceylon to the mismanagement at Kew. I went to Kew to enquire into their methods; but there was nobody in the place who had ever been in a rubber country, or who knew an atom about cultivation, collection &c.; in a word they knew absolutely nothing beyond the Latin names of the trees. I am not a botanist, but I have seen rubber trees and collected rubber from them; and I feel sure that had your planters obtained help from natives of South America instead of from the incompetents of Kew Gardens, the caoutchouc industry would now be a most flourishing trade in your island.—With thanks for your courtesy,—Yours faithfully,

C. PURCELL TAYLOR.

TWIN AND TRIPLET COCONUT PLANTS.

Marawila, Feb. 19.

Dear Sir,—I suppose you are aware of the phenomenon of two coconut plants growing out of one nut. This is often met with. A friend of mine once told me he had three growing out of one nut, and I was at first inclined to think he was romancing, more especially as he told me he had separated the plants and they were all growing. As a rule, when two plants grow from the same nut, one is weakly and does not bear. From where I write there are three trees growing together, evidently out of one nut. As regards size, vigour and bearing properties they are hard to beat.

A coconut, as every man knows, has three "eyes." The sprout is from one of these. I was always under the impression that each "eye" contributed a sprout when more than one plant resulted from one nut. The accompanying has disillusioned me. As you will see, the twin sprouts are from one eye. Others may have known and noticed this before. I did not. —Truly yours,

B.

BLIGHT ON TOMATO PLANTS.

Jaffna, Feb. 21.

Dear Sir,—Do you know any cure for the blight which makes vigorous tomato plant curl up their leaves and pretty much stop growing and bearing?

T. S. S.

[Perhaps some correspondent will answer the above.—Ed. *T.A.*]

THE KIND OF TEAS THAT ARE REQUIRED.

Sir,—I would draw the attention of planters to the following extract from Messrs. I. A. Rucker & Bencraft's weely tea circular, dated February 6th, received by this mail:—

"Last week we stated that broken pekoes were the cheapest teas on the market. This week they are 1d. to 2d. cheaper. Enquiry shews that the dealers are rather over supplied with this grade, of which a large proportion out of recent invoices has consisted. The practice of cutting up pekoes and pekoes Souchongs, and marking them broken pekoe, in order to secure a higher average, was a subject we discussed fully this time last year. It is now apparently about to work out its own cure. Seldom do we see the best made of the broken pekoes, when the proportion is greater than 30 per cent of the whole invoice.

"Two or three invoices are before us in which the broken pekoes, and pekoe souchongs so marked, are in the proportion of 50 to 75 per cent of broken pekoe."

At the present time when every effort is being made to open up new markets, this is worthy of special consideration, as particularly in both America and Russia the Trade must have well made teas, small broken flakey sorts are useless.—Yours etc.,

J. A. J. C.

THE PLANTING INDUSTRY OF SOUTHERN INDIA.

Madras, Feb. 29th.

Sir,—In your issue of 25th instant you commence your leading article headed "The Wynaad" in these words:—

The London *Times*, in an ably written article having for its text the deputation of the planters of Southern India that lately had an interview with Lord Elgin, recites the leading difficulties under which the planting enterprise in the Wynaad now suffers. Want of communication with the seaboard, of protection for produce in transit, proper organization of labour, and fixity of tenure, and of security of the results to taxation, are among the chief disabilities set out in this article.

The actual words used by the writer in the *Times* were as follows:—

The grievances of the Southern Indian planters are very practical. He makes no great demands on the Government, but the demands which he does make he regards as indispensably necessary for the working of his business. Fixity of tenure in his estate, safeguards against fraud in the supply of his labour, protection of his produce against theft, and adequate means of communication towards the sea—these are the initial conditions for successfully planting in any country, and they sum up the total of the South India planters' requests.

Allow me, however, to point out that these words of the *Times* do not refer specially to the Wynaad but to the planting industry of Southern India as a whole. The former is a single district, the latter includes fourteen different districts, and therefore what may be a genuine grievance to planters resident in one or other of these fourteen districts may have and does have no meaning to the Wynaad planter. For instance, the fixity of tenure and the means of communication with the sea-board are excellent in the Wynaad; and I do not think any Ceylon planter, certainly not one from the Dimbula district, would have cause to quarrel with the organisa- of labour. As regards protection of produce in Southern India may I be allowed to quote these words from the Annual Report of the Planters' Association of Ceylon on cocoa stealing:—

"Your Committee regret that apparently the Government is apathetic in the matter and has taken no further steps to check what has been and again will be the scandalous insecurity of growing crops."

The planting industry of Southern India admittedly suffers from "beams," but is that of Ceylon altogether free from "motes"? I am afraid not. However my main reason for addressing you is to request you not to make the Wynaad the scape-goat of the whole industry. I feel that I am in part to blame for this; for had there been no reference in the article of the *Times* to my pamphlet, you would hardly have headed your leading aricle with the name of a district which is never once referred to by the writer in the *Times*. He confines himself entirely to the second chapter in my book which I have particularly mentioned has reference to the planting industry of our Sothern India as a whole.

—Faithfully yours,

FRANCIS FORD.

THE CASTLEREAGH TEA COMPANY OF CEYLON, LTD.

The annual general meeting of this Company was held on Feb. 26th.

The Chair was taken by Mr. H. CREASY, who, after the usual preliminary formalities, moved the adoption of the fifth annual report now before the meeting.

The MANAGING DIRECTOR, in seconding, said that all possible detail and information having appeared in the report, he need, perhaps, only explain that though the profit earned was about 17 per cent it was necessary to carry forward a balance representing about 3 per cent because the manure applied in the concluding months or weeks of last year was for purposes of accounting more correctly, chargeable this year, though not constituting an asset available for dividend. The Company's investment exceeded the subscribed capital by some R6,000 and it would be seen that as yet there was no reserve fund which he thought every agricultural Company should maintain. The crop represented a yield of 420 lb. per acre against 229 in the previous year, having very considerably exceeded the estimate, which was in a great measure to be attributed to a very favourable season, allowing cost of production to be reduced though, at the same time, the value of the produce had somewhat fallen. The profits of the Company now depend in a marked degree upon the quality of the tea which it is the anxious desire of the management to improve. The new machinery was proving in every way satisfactory, while withering accommodation had been increased. The estimate for 1896 had been placed rather below the figure of 1895, and at present the weather was not favourable to a large yield. The capital account represented the moderate rate of R508 per acre, and the Proprietors who might have purchased at R150 per share had paid the comparatively moderate rate of R762 per acre for the tea. The number of shareholders is now 101, against 87 a year ago.

Mr. GORDON PYPER having expressed satisfaction with the report in all respects except that at present there existed no reserve fund, the formation of which, he thought, should be a first charge upon the profits; the report was put to the meeting and adopted unanimously.

Mr. C. D. PATULLO moved and Mr. J. A. MARTIN seconded, that a dividend of R8 for the half-year ended 31st December 1895 (making with the interim dividend paid in August 1895 a distribution of 15 per cent for the year 1895) be declared and made payable on 28th February 1896.—Agreed to.

Mr. GORDON PYPER moved, and Mr. C. D. PATULLO seconded, that Mr. John Helps Starey be re-elected a Director.—Carried.

Mr. C. D. PAULLO moved, and Mr. GORDON PYPER seconded, that Mr. John Guthrie be re-elected Auditor at a fee of R50 per annum.—Carried.

A discussion then took place on Mr. Gordon Pyper's suggestion as to reserve fund, which resulted in Mr. G. PYPER moving that the Directors set aside every year 2½ per cent of the profits till the sum of R25,000 be attained. This was duly seconded and carried.

A vote of thanks to the Chair concluded the proceedings.

THE YATADERIA TEA COMPANY OF CEYLON, LIMITED.

The following is the report of the proceedings at the annual general meeting held on Wednesday, the 26th Feb.

The notice of meeting was read and minutes of last meeting were passed. The report was taken as read.

In the absence of Mr. Masefield, the chair was taken by Mr. DAVID FAIRWEATHER, who, expressing regret at Mr. Masefield's unavoidable absence, mentioned that he had, however, paid his usual visit to the estate and had sent in a report to the Board which was receiving the best attention of the Directors. He moved the adoption of the seventh annual report now before the meeting.

The MANAGING DIRECTOR, in seconding, said the report had been framed with the object of giving shareholders (many of whom were unable to attend) all possible information in full detail, but he might explain the views of the Board in the proposals before them. It appeared that the profit earned during the past year was slightly over 50 per cent. of which about 30 per cent. had come out of the second half-year, and the proposal to divide only 45 per cent., and carry nearly 8 per cent. to reserve, carrying forward rather over 6 per cent. was made, in a spirit of moderation, in view of the exceptional prosperity of the past year when the weather had been very favorable and the market for teas for price had been much higher than it now is. In building up the reserve, the directors were obeying the mandate of former meetings, and, if the sum now proposed to be transferred, appeared to some unnecessarily large, the occasion for it arose out of the exceptional profits, while, at the same time, the proprietors were to receive half as much again in dividends this year as compared with last. There was another exceptional feature in the figures, in that the portion of 1894 crop not sold when those accounts were made up, had realised much more than expected, to the extent of 4½ per cent. profit now to be disposed of. This year, on the other hand, it was to be feared that, in consequence of the recent sudden rise of about 5 per cent. in exchange, the tea not yet sold might prove to have been over-valued, and hence it was advisable to carry forward a good balance though indeed, it was only about 1 per cent. more on the capital than that of last year. Under these circumstances he could not suppose there could be two opinions as to the wisdom of following a policy of moderation, rather than declaring record dividends which might perhaps not be maintained for even another year. He had heard of comparisons drawn, but in fact, these was no comparison in the rate of dividends unless other conditions were considered. He had only heard of one dividend exceeding that now proposed, and it was patent on the accounts that 45 per cent in the case of Yataderia showed a higher measure of success than 50 per cent in the other case. The total dividends of this Company would now amount to 167 per cent, while the property had greatly improved in value, the present price of shares representing about R1,275 per acre. The investments of the Company stood at R210,000 which was just balanced by the share capital and reserve fund; at the same time, more land was being purchased and being opened, while the Factory was about to be extended and the turbine renewed; and the time had not, in the opinion of the Board, arrived for scattering all the profits of the Company as fast as they came in. The estimation of shares in the market would stand much higher when there is a substantial reserve than otherwise. The undeveloped resources of the Company are represented by 105 acres tea not in bearing, and 330 acres of good jungle. He was pleased to say that labor was

an ample supply, there being nearly 1,200 coolies, with advances outstanding, averaging less than R4 per head. The crop of 1895 was 823 lb. per acre, against 698 lb. in 1894; the rainfall: 142¼ inches, against 145 average for 5 years, and 35 inches more than in 1894. All fields showed increased returns except 2 not pruned in 1894. The estimate for 1896 was 768 lb. per acre. He begged to second the adoption of the report.

Two or three shareholders thereupon expressed their desire that a smaller sum should be placed to reserve, and 5 per cent. more be divided, carrying forward a smaller balance; but the Directors having stated that they could not consent to this without giving other proprietors the opportunity of expressing an opinion, agreeing or otherwise, with the deliberate recommendation of the Board, the proposal was not pressed, and the motion that the report and accounts be adopted was carried *nem. con.*

Mr. J. MARTIN then moved, and Mr. J. R. FAIRWEATHER seconded, "that a dividend of R12·40 per share for the half-year ended 31st December 1895, making (with the interim dividend of R12·50 per share paid in August 1895) 25 per cent. for the year 1895 and a bonus of R20 per share, or 20 per cent. for the year 1895, be declared and made payable on the 29th February 1896.—Carried unanimously.

Mr. GORDON PYPER moved, and Mr. J. A. MARTIN seconded, "that Mr. David Fairweather be re-elected a Director," which was agreed to.

Mr. J. A. MARTIN moved, and Mr. C. M. GWATKIN seconded, "that Mr. John Guthrie be re-elected auditor at a fee of R100 per annum."

Mr. J. A. MARTIN proposed, and Mr. GORDON PYPER seconded, a vote of thanks to the Director and the Superintendent of the Estate for their services and with the usual vote of thanks to the Chairman the proceedings terminated.

THE YATIYANTOTA TEA COMPANY, LIMITED.

The eleventh annual ordinary general meeting of Shareholders, was held on Feb. 29th, when the following report was submitted:—Directors: W. D. Gibbon, Esq., Eric S. Anderson, Esq., Chas. Young, Esq., G. W. Carlyon, Esq. Estate Inspector.—Chas. Young, Esq. Estate Superintendents.—Messrs. W. R. G. Hickey and A. Angus.

ACREAGE.

OLD POLATAGAMA.

Tea in bearing	..	517 acres.
Tea not in bearing	..	148 ,,
Forest	..	338 ,,
		1,003 acres,

River Reserves 39 acres.
Grand Total..1,489 ,,

NEW POLATAGAMA.

Tea and Coconuts not in bearing	..	235 acres.
Forest	..	212 ,,
		447 acres.

The Directors have pleasure in submitting to the Shareholders the Accounts of the Company for the past year.

The crop secured amounted to 310,010 lb. Tea, being 35,010 lb. over the Estimate and 46,479 lb. more than the yield in 1894. The net average sale price was 42¾ cents per lb., whilst the cost laid down in Colombo was 21 cents per lb. The net profit for the year, including a balance of R431·08 from 1894 amounted to R61,024·42, equal to 61 per cent on the Capital of the Company. An Interim Dividend of 10 per cent was declared on 3rd August last, and the Directors recommend a final dividend of 40 per cent making a total of 50 per cent for the year, and that after payment of R3,000 extra fees to the Directors in terms of the resolution passed in 1893, and a transfer of R1,750 to Special Reserve Fund, the balance of R6,274·42 be carried forward to the current year's Accounts.

The sum of R2,325·55 transferred to Special Reserve Fund last year has been written off, the debt being now deemed irrecoverable.

During the year River Reserves to the extent of acres 38-3-21 were purchased at upset price from Government.

To provide for repayment of Debentures which become payable on 1st January, 1897, and other debts of the Company, it will be necessary to increase the Capital or to reconstruct the Company before the end of this year, and a scheme will be laid before the Shareholders in due course.

The Estimated crop from Old Polatagama for 1896 is 310,000 lb. Tea on an estimated outlay on Working Account of R65,950. In addition to this expenditure it is estimated that the sum of R13,000 will be spent on Capital Account for a new clearing of 22 acres tea, additions to buildings, upkeep of young tea, planting coconuts, &c. The Directors have still under consideration the question of water supply to the Factory; but the estimates so far obtained have been considered too high to allow of the work being taken in hand at present. The expenditure on New Polatagama is estimated at R13,600, against which it is expected that 25,000 lb. Tea will be secured.

In terms of the Articles of Association, Mr. W. D. Gibbon now retires by rotation, but is eligible for re-election.

The appointment of an Auditor for the current year will rest with the Meeting.

By order of the Directors, WHITTALL & Co.,
Agents and Secretaries.

The report and accounts were adopted and a final dividend of 40 per cent was declared making 50 per cent for the year. There were present:—Messrs. Chas. Young, (in the chair), G. W. Carlyon, W. D. Gibbon, Directors; A. Thomson and W. H. G. Duncan represented by G. W. Carlyon, and A. R. Wright by W. D. Gibbon.

THE TONACOMBE ESTATES COMPANY OF CEYLON, LTD.

The following is the report of the Directors presented to the second ordinary general meeting of shareholders of the above Company held on Feb. 28th:—

ACREAGE.

The Acreage of the Company's properties is as follows:—

		Acres.
Tea in bearing	..	357
Tea seed bearers	..	6
Tea not in bearing	..	155
Total Tea	..	518
Cleared for planting in April	..	22
Cardamoms in bearing 65 acres.		
Do not in bearing 18 ,,		
		83
Coffee	..	55
Forest and fuel plantation	..	32
Chena and Patna	..	926
Grand Total	..	1,636

During the nine months under review the total quantity of Tea secured was 98,521 lb., which have been sold at an average of 55·34 cents net.

The total Cardamoms picked amount to 9,525 lb., of which 3,377 lb. have been sold at an average of R1·67 per lb. The balance is estimated in the accounts to realise R1·50 per lb.

319$\frac{2}{3}\frac{1}{2}$ Bushels of Coffee have been harvested and realised R5,234·38, or R16·36 per bushel.

The total expenditure amounts to R36,700·55.

The balance available after providing for Depreciation amounts to R27,854·12, of which R14,000

(=5 %) was paid as an Interim Dividend in October, and the Directors now propose to pay a final Dividend of 4% absorbing R11,200; to place R2,000 to credit of "Extensions Account," and to carry forward R654·12 to the next account.

A wire tramway, rather over half mile in length from the factory to the end of the estate cart road, estimated to cost R10,000, is now being erected. This is a most desirable improvement, as transport, both of estate produce and rice, will be greatly facilitated and cheapened, besides which all cooly transport will thereby be done away with—a great consideration.

During 1896 it is proposed to plant 82 acres of land with Tea and 27 acres with Cardamoms.

The crops for 1896 are estimated as follows:—

140,000 lb. Tea.
12,000 lb. Cardamoms.
250 bushels Coffee.
on an expenditure of R18,955·50.

Of the Directors Mr. W. H. Figg retires by rotation, but is eligible for re-election.

An Auditor for 1896 will have to be appointed at this meeting.—By order of the Directors,

CUMBERBATCH & Co., Agents & Secretaries.

The following are the minutes of the meeting:—*Present*:—Messrs. H. Cumberbatch (chairman), Directors Messrs. A. M. Vaughan Hughes and A. M. Caldicott Smith, and by their attorneys Col. E. Corse-Scott, Messrs. W. Bowden Smith, W. S. Bennett, A. Fetherstonhaugh, Col. Langford Brooke and Major MacNab.

The notice convening the meeting was read. The minutes of the last meeting of the 3rd June 1895 were read and confirmed.

The CHAIRMAN said that there were only two items in the report on which he thought he need make any comment, the one being the acreage of the estate which, since the report was printed, had been increased by a purchase from Government of 22 acres, 2 roods, 16 perches, at a cost of R309·14, of which about 15 acres were forest and would be planted with cardamoms this year, and being conveniently situated would in time be available for fuel for the Factory.

The other item was the amount due on Debentures which the Directors had thought it prudent to show at the rate of exchange ruling at the time the properties were purchased by the Company viz., £5,000 at 1s 0d 31-32 R92.530·12. As a matter of fact £5,000 at the exchange of the day say 1.2 11-16ths only represented R81.072·13.

Proposed by Mr. CALDICOTT-SMITH, seconded by Mr VAUGHAN-HUGHES;—"That the report of the Directors as circulated among the Shareholders be adopted."—Carried.

Proposed by Mr CALDICOTT-SMITH, seconded by Mr A. M. VAUGHAN-HUGHES:—"That a dividend of four per cent be payable forthwith,"—Carried.

Proposed by Mr A. M. CALDICOTT-SMITH, seconded by Mr A. M. VAUGHAN-HUGHES:—"That Mr W. H. Figg, be re-elected a Director of the Company."—Carried.

Proposed by Mr A. M. CALDICOTT-SMITH, seconded by Mr A. M. VAUGHAN-HUGHES:—"That Mr Hercules J. Scott be appointed Auditor for 1896 at the ordinary fee."—Carried.

THE UPPER MASKELIYA ESTATES COMPANY, LIMITED.

The 4th annual ordinary general meeting of the Shareholders was held on Feb. 29th when the directors report was submitted as follows:—Directors: G W. Carlyon, Esq., by C. A. Leechman, Esq., and W. D. Gibbon, Esq. Estate Inspector.—W. D. Gibbon, Esq. Estate Superintendent.—A. E. Wright, Esq.

ACREAGE OF BRUNSWICK & BLOOMFIELD ESTATES.

Tea in full bearing	446	Acres.
Grass, Timber Trees, &c.	72	"
Total ..	518	Acres.

The Directors have pleasure in submitting to the Shareholders the Accounts of the Company for the past year.

The quantity of Tea secured in the year was 227,359 lb., being 7,359 lb. in excess of the estimate, and the average net price realized was about 48¼ cents per lb.

After making the usual ample provision for Depreciation of Buildings and Machinery, the net profit for the year amounted to R41,145·84, in addition to which a balance of R14,451·76 was brought forward from 1894, making a total of R55,597·60 available for Dividend equal to over 20½ per cent. on the Capital of the Company.

An interim Dividend of 8 per cent was declared on the 3rd August, and the Directors recommend that a final Dividend of 10 per cent be declared, making 18 per cent for the year. The sum of R6,997·60 will then remain to be carried forward to the current year's account.

The estimate of tea 1896 is 223,000 lb. on an expenditure of R66,742·50, and the estimated profit from other sources is R8,800. In addition to the above expenditure the sum of R1,500 is allowed in the estimates for new caddies and rice store.

In terms of the articles of Association Mr. G. W. Carlyon now retires by rotation from the office of Director, but being eligible offers himself for re-election.

Mr. A. E. Wright having expressed his intention to be absent from the island for the greater part of this year, the management of the Company's estates has been placed in the hands of Mr. L. A. Wright.

The appointment of an Auditor for 1896 will rest with the meeting.—By order of the Directors

WHITTALL & Co., Agents and Secretaries.

The report and accounts were adopted and a final dividend of 10 per cent. was declared making 18 per cent. for the year.

There were present Messrs. W. D. Gibbon (in the Chair), C. A. Leechman and G. W. Carlyon, Directors:—Messrs. L. E. Edwards, G. H. Alston, C. S. Warren, G. C. Walker, and C. M. Gwatkin. Messrs. A. Thompson and W. H. G. Duncan were represented by Mr. G. W. Carlyon, and Mr. Jas. Forbes by Mr. G. C. Walker.

THE WE-OYA TEA COMPANY, LIMITED

The annual ordinary general meeting was held on Feb. 29th. The report of the Directors was as follows:—

Directors: Walter J. Smith, Esq.; Eric S. Anderson, Esq. and Chas. Young, Esq. Estate Inspector:—Charles Young, Esq. Estate Superintendent:—A. Angus, Esq.

ACREAGE.

Tea planted 1858—1893		..	381 acres
Do 1895		..	16 "
Grass	..	..	5 "
Cultivated ..		..	402 acres
Forest ..		..	221 "
Total Estate		..	623 acres

The Directors have pleasure in submitting to the Shareholders the Accounts of the Company for the past year.

The crop (including about 250 lb. from purchased leaf) amounted to 195,491 lb. Tea, being 25,491 lb. in excess of the estimate and 49,787 lb. more than the yield in 1894.

The net average price realized for the Tea was about 41 cents per lb. against a cost laid down in Colombo of a little over 21 cents per lb.

The net profit for the year, including a balance of R3,215·25 from 1894 but excluding premium on new Shares, amounted to R36,001·61, equal to over 27¼ per cent. on the paid up Capital of the Company. An interim Dividend of 10 per cent. was declared on the 3rd August last absorbing R13,000, and the Directors recommend a final dividend of 15 per cent., making 25 per cent. for the year, and that after payment of R1,000 extra fees to the Directors, in terms of the Resolution passed on 18th February 1893, R2,501·61 be carried forward to the current year's account.

On the 1st January, 1895, 250 shares of R100 each were issued at a premium of R50 per share. This premium, amounting to R12,500, has been credited to Profit and Loss Account; but the Directors propose that the amount should be transferred to "Depreciation Account" to provide for depreciation of Buildings and Machinery.

The new Factory referred to in last year's Report was, with the exception of some additions allowed for in this year's estimates, completed during the year, and the manufacture of Tea was commenced in it at the end of November. The cost has very considerably exceeded the Engineer's estimate, but the work has been most successfully carried out and the Factory is admirably suited for the preset and future requirements of the Estate.

The Directors propose during this year to issue the unpaid balance of Capital (R20.000) and to offer the shares, in terms of Article No. 7 of Association, at a premium to be fixed later on, due notice of which will be given to Shareholders.

The crop in 1896 is estimated at 210,000 lb. Tea on an expenditure of R45,150 on Working Account. The estimated expenditure on Capital Account for the completion of the Factory and for upkeep of young clearings is R5,167·72.

In terms of the Articles of Association Mr. Walter J. Smith retires by rotation from the office of Director, but is eligible for re-election. Mr. A. Thomson, who was elected a Director at the last Annual Meeting, resigned his seat on the Board when leaving for England.

Tho appointment of an Auditor for the current season will rest with the meeting.

By order of the Directors,
WHITTALL & Co., Agents and Secretaries.
Colombo, Feb. 1st.

The Report and accounts were adopted and a final dividend of 15 per cent was declared making 25 per cent for the year. There were present Messrs. Chas. Young, in the Chair; and W. Smith, Directors; G. W. Carlyon, G H. Alston, E. Young represented by C. Young and A. Thomasz, by G. W. Carlyon, Major G. L. Gwatkin by W. D. Gibbon and W. D. Gibbon.

THE AGRA OUVAH ESTATES CO., LTD.

The annual ordinary general meeting was held on Feb. 29th. when the following report was submitted:—

DIRECTORS:—W H Figg, Esq., C A Leechman, Esq., A Stevenson, Esq., G W Carlyon, Esq. Estate Inspector—Chas Young, Esq. Estate Superintendent—R K Clark, Esq.

ACREAGE:—

Agra Ouvah.

Tea in full bearing	172	acres
,, in partial bearing ..	28	,,
,, not in bearing	102	,,
Coffee amongst Tea (102 acres)		
Grass and jungle	29	,,
Total Estate	331	acres

Frankerton.

Tea in full bearing	87	acres
,, in partial bearing.. ..	17	,,
,, not in bearing	61	,,
Coffee amongst tea (61 acres)		
Grass, patana and scrub ..	28	,,
Total Estate	193	acres

Grand Total 524 acres.

The Directors have pleasure in presenting to the shareholders, the accounts of the Company for the past year.

The crops secured were 191,685 lb. tea, or 31,685 lb. over the estimate, and 1,291 bushels, parchment and 13 cwt. clean coffee, against an estimate of 1,000 bushels parchment.

The average net prices realised for this produce were 66¼ cents per lb. and R17·85 per bushel respectively; the prices in the previous year being 68½ cents and R18·20.

After making the usual provision for depreciation of buildings and machinery, the net profit for the year, exclusive of R5,382·45 brought forward from 1894, amounted to R83,556·65, or about 22¼ per cent on the Capital of the Company. An interim Dividend of 8 per cent was declared on the 3rd August last, and the Directors now recommend the payment of a final Dividend of 12 per cent., making 20 per cent for the year, and that R7,500 be transferred to the Extension Fund. This will leave a balance of R6,439·10 to be carried forward to the current season's account.

The estimates for this year are 200,000 lb. of tea and 400 bushels of coffee, on an expenditure of R80,186·24, which sum includes the cost of manufacturing 200,000 lb. of tea for neighbouring proprietors. The income from this source and from rents is estimated at R25,200.

The expenditure on capital account, chiefly to meet the increased requirements of the Factory, is estimated at R13,500, towards which outlay the above mentioned sum of R7,500 will be available. The Directors recognize the uncertain nature of income from manufacturing "outside" leaf, but they consider that additional accommodation in the factory is in any case necessary, in view of the increasing yield of the Company's own estates.

In terms of the Articles of Association, Mr. W. H. Figg retires in rotation from the office of Director, but is eligible for re-election.

The appointment of an Auditor for the current year will rest with the meeting.

By order of the Directors, WHITTALL & Co., Agents and Secretaries.

The report and accounts were adopted and a final dividend of 12 per cent was declared making 20 per cent for the year. There were present:—Messrs. C. A. Leechman (in the Chair), G. W. Carlyon, A. Stevenson, Directors, G. H. Alston, E. John, C, J. Donald. Mr. A. E. Wright was represented by Mr. W. D. Gibbon, and Mr. H. Tarrant by Mr. C. A. Leechman.

The first ordinary general meeting of the Ruanwella Tea Company, Limited, will be held on Saturday, March 14 to receive the report of the Directors and accounts for the past year. The first ordinary general meeting of the Kirklees Estate Company, Limited, will be held on Saturday, March 14, to receive the report of the Directors and accounts for the past year and to declare a dividend. An extraordinary general meeting of the Kandyan Hills Company, Limited, will be held on the 7th March to pass the following special resolution:—That the Directors be authorized to grant a mortgage to Messrs. R. A. Bosanquet, G. F. Traill and J. D. Balfour, over the Pansalatenne estate, to secure the payment of the sum of £4,500 sterling (being the balance purchase money for the estate) on or before December 31, 1898, and until payment to pay interest thereon or on any balance remaining due thereon, at the rate of 7 per cent. The ordinary general meeting of the shareholders of the Drayton (Ceylon) Estates Company, Limited, will be held on March 10 to receive the report of the Directors and statement of accounts to December 31, 1895, to declare a dividend and to elect a Director and an Auditor.

NEW COMPANIES.

THE KNAVESMIRE ESTATES COMPANY, LIMITED.

The memorandum and articles of association of the Knavesmire Estates Company, Limited, are published in the *Gazette*. Among the objects for which the Company is established are—To purchase or otherwise acquire the Knavesmire estate and premises situated in the District of Kegalla. To purchase tea leaf and (or) other raw products for manufacture, manipulation, or sale. To manufacture tea leaf and (or) other raw products. To plant, grow, and produce, buy, sell, trade, and deal in tea, coffee, cinchona, cacao, cardomoms, and other plants, trees, and natural products of any kind or any of them. The liability of the shareholders is limited. The nominal capital of the Company is R500,000 divided into 5,000 shares of R100 each, with power to increase or decrease the capital. A share each has been pur-

chased by S. Payne Gallwey, Arthur Padwick, Thos. S. Grigson, Edward S. Grigson, F. J. de Saram, John Paterson and G. Chapman Walker.

THE RONDURA VALLEY TEA COMPANY OF CEYLON, LD.

The memorandum and articles of association of the Rondura Valley Tea Company of Ceylon, Limited, are also published in the *Gazette*. Among the objects for which the Company is established are—To purchase or otherwise acquire (1) the Rondura estate, situated in the district of Uda Bulatgama, containing in extent 196 acres or thereabouts, from Arthur Edwin Scovell; and (2) the Broadlands estate, situated in the district of Uda Bulatgama, containing in extent 316 acres 3 roods and 33 perches (according to Government title plan, but on subsequent resurvey found to contain 354 acres or thereabouts), from Arthur Edwin Scovell and Alfred Scovell and their co-owners. To purchase tea leaf and (or) other raw products for manufacture, manipulation, and (or) sale. The liability of the shareholders is limited. The capital of the Company is R500,000 divided into 5,000 shares of R100 each, with power to increase or reduce. A share each has been purchased by Henry Bois, Fred. Wm. Bois, Jas. Murdoch, P. Mould, W. Moir, F. J. de Saram and V. Christian.

THE RAYIGAM COMPANY, LIMITED

The *Gazette* also contains the memorandum and articles of association of the Rayigam Company, Limited. Among the objects for which the Company is established are—To purchase or otherwise acquire the Rayigam estate in the Neboda-Kalutara District, or any part or parts thereof. To prepare, manufacture, treat, and make marketable tea and (or) other crops of produce, and to sell, ship, and dispose of such tea crops and produce, either raw or manufactured, at such times and places, and in such manner as shall be deemed expedient. To purchase tea leaf and (or) other raw products for manufacture, manipulation, and sale and to manufacture, manipulate, and sell the same. To amalgamate with any other Company having objects altogether or in part similar to this Company. The liability of the shareholders is limited. The nominal capital of the Company is R1,000,000 divided into 10,000 shares of R100 each (of which R425,000 are now called up), with power to increase or reduce the capital. A share each has been purchased by H. Creasy, W. Somerville, W. Seale, Gordon Frazer, John Wilson, F. M. Mackwood and T. J. Anderson.

VARIOUS PLANTING NOTES.

TEA IN JAVA.—The tea estates in the Preanger regency, Java, did well last year. The outturn from Sinagar Tjirohani was 1,050,000 pounds; from Parakan Salak without Tjisalak 900,000 lb.; and from Tjiboengoer, which did best of all, 525,000 lb. from 300 bouws Assam tea. Pengalengan, a tract of virgin land of about 800 bouws, in the Bandong district, has been bought by Heer R. Kerkhoven of Gambong, and is to be formed into a tea estate worked by a company.

DR. MORRIS, C.M.G.—It is gratifying and inspiriting to hear of the Assistant Director unfurling the flag of Kew, if we may so speak, not only in our colony of Bahamas, but in New York itself. Dr. Morris turned a winter holiday to account by visiting the Bahamas with a view of developing the vegetable resources of the colony, and of promoting the culture of the valuable Sisal Hemp. His lectures were attended by the Governor and the leading citizens, and there can be no doubt that good results will follow. In New York, a descriptive and illustrated lecture was given on the Royal Gardens at Kew, which was specially appropriate, in view of the establishment of a similar institution in the vicinity of New York. Dr. Morris, it appears, visited the proposed site, expressed his approval of it, and took the opportunity to wish God speed to the enterprise on the part of the botanical institutions of the Old World. Before leaving the city, he was entertained at dinner by the President and members of the Torrey Botanical Club.—*Gardeners' Chronicle*, Jan. 31.

COLOMBO TEA AVERAGES.

Our evening contemporary has compiled the following list of averages of Ceylon estates selling in Colombo:—

Estate.	lb.	Avr. Price per lb.	Estate.	lb.	Avr. price per lb.
Palmerston	14 140	75	Nugagalla	33,110	50
Tientsin	24,522	73	Kirklees	30.350	50
Denmark Hill	23,916	73	Harangalla	80 030	49
Callandar	16,005	71	Malvern	41,400	49
Naseby	13,135	70	Clunes (Eracht div.)	101,060	49
Court Lodge	42,689	69	Dunbar	69,484	49
Agra Ouvah	124,990	69	Augusta	77,569	49
Ardlaw & Wishford	30,854	68	Periakandekettia	29,085	49
Langdale	81,662	67	Glencorse	80,806	49
Pedro	72,155	67	Anningkande	70,830	49
Scrubs	13,300	66	Labugama	28,425	49
Easdale	13,554	66	Stisted	70,205	49
Middleton	66,165	65	Roseneath	37,650	49
Radella	63,560	65	Ukuwella	103,765	49
Ottery & Stamford Hill	145,078	65	Kuruwitty	14,409	48
Hethersett	14,116	65	Amblakande	48,830	48
Sandringham	53,270	64	Morankande	74,940	48
Glenorchy	42,270	63	Rondura	26.670	48
Mocha	81,600	62	Kirindi	35,093	48
Harrington	43,037	61	Laxapanagalla	23,122	48
Glasgow	108.138	61	Clunes	110,735	47
Avoca A. I.	49,313	60	Logan	50,545	47
Gonavy	73,282	60	Wattagalla	53,638	47
Cleveland	31,470	60	Walahanduwa	43,015	47
Bismark	11,224	59	Eadella	75,960	47
"Anchor"	54,907	59	Eila	139,540	47
Tonacombe	112,200	58	Sirisanda	45,086	47
Ireby	50,110	58	Melrose	47,354	47
Lameliere	35,113	58	Arslena	53,050	47
Dunkeld	62,289	57	Lonach	53,525	46
Macaldenia	35,807	56	Weoya	138,414	71
Patiagama	29,550	56	Ambalawa	36,847	46
Barkindale	10,324	56	Blackstone	73,080	46
Kaskieben	44,905	56	Polatagama	155,250	46
Templestowe	50,310	56	Kelani	111,751	46
Dammeria	111,543	56	Allakolla	70,140	46
Deaculla	60,205	55	St. Kolumbkelle	33,195	46
Choughleigh	9,255	55	Allington	9,665	46
Kelaneiya	66,065	55	Maddagedera	73,960	46
Torwood	58,999	55	Galtawatta	23,705	46
Farnham	62,815	55	St. Helen	71.050	46
Freds Ruhe	63,820	54	Benveula	25,600	46
Ferndale	19,812	54	Madooltenne	44,400	46
Maha Uva	56,131	54	Monrovia	46,300	46
Poilakande	11,147	54	Verulupitiya	61,195	46
Dickapittia	21,518	54	Knavesmire	87.318	45
Stinsford	57,083	53	Ederapolla	109,115	45
Queensland	55,222	53	St. Catherine	17,193	45
Clyde	42,480	53	Claremont	41,065	45
Agars' Land	18,815	53	Forest Hill	19,322	45
Glentilt	82,210	53	Lyndhurst	51,502	44
Waitalawa	67,190	53	Ascot	66,175	45
Liskilleen	21,595	53	Ingeriya	26,756	44
Gampaha	24,873	53	Kanangama	85.720	44
Wewesse	58,560	52	Meemoranya	17,480	44
Vogan	66,580	52	Tarf	27,105	44
Penrith	150,605	52	Ellekande	83.908	44
Alnoor	32,625	52	Vincit	17,992	43
Theberton	24,350	52	Bloomfield	102.380	43
Great Valley	134,976	52	Ivies	23,165	43
Doranakande	27,860	52	New Tunisgala	26,367	43
Whyddon	20,565	52	Moragalla	7,047	42
Glenrhos	60,390	51	Hunugalla	56,615	42
Castlereagh	71,055	50	Depedene	43,795	42
St. Heliers	80,488	50	Warakamure S.Y.	39,012	42
Ayr	48,012	50	Yataderia	83,160	42
Pansalatenne	53,800	50	Ganapalla	91 390	42
Talgaswela	109,671	50	Hagalla	31,030	40
Matale	30,720	50	Hatdowa	26,626	40
Chesterford	80,670	50	Blackburn	34,900	40
			Kalkanda	30,310	39

THE TONACOMBE ESTATES CO. OF CEYLON, LTD. —We congratulate the shareholders of this Company on the *interim* dividend of 4 per cent declared making 9 per cent for the year. The fact of the Directors being able to make such a recommendation and to carry forward R654·12, besides placing R2,000 to the credit of the "extension account" shows the Company to be in a flourishing condition.

COFFEE CULTIVATION IN QUEENSLAND.—The *Australian Agriculturist*, (Brisbane) of Feb. 1 says:—In the course of a report presented to the council, Mr. Soutter, manager of the Acclimatisation Society, stated that there were numerous applications for coffee received from all parts, many of which were totally unsuited to its cultivation. Correspondents residing where the conditions were unfavourable had been replied to, warning them against incurring unnecessary labour and expense in attempting the cultivation of coffee.

"ROYAL GARDENS, KEW."—The Bulletin of Miscellaneous Information for January has the following contents:—Root Diseases caused by the Fungi; Great Frost for 1895; Leppett Tea; Decades Kewenses: XXIII.—XXV; Date Cultivation in Antigua; Miscellaneous Notes.—Visitors during 1895; Botanical Magazine; Index Kewensis; Palm House Terrace; Geranium wallichianum as a dye plant; Recent Presentations to the Herbarium; Coloured Figures of Fungi; Robert, Basse, and de Chastillon's Recueil de Plantes; Ipecacuanha in Southern India. The paper on "Leppett Tea" is reproduced elsewhere.

A DUTY ON TEA IN THE UNITED STATES.—The *American Grocer* of Jan. 29 says:—This we have always favoured as a source of revenue that would tend to improve the quality of the imports and would not be felt by consumers. A tax on tea and coffee makes all the people supporters of the general government with less inconvenience than any other tax it imposes, with the exception of a duty on sugar. A duty on tea and coffee would yield between twenty and thirty millions, and part, if not the most of it, would be paid by the producers. We have, however, little hope of such a duty being levied, because, as a distinguished Senator remarked, "It might be wise as a business measure, but it would be—— bad politics." Neither party in Congress will be willing to be charged with destroying "a free breakfast table," and with a Presidential contest near at hand, it is very doubtful if a measure taxing tea and coffee could be made law.

BURMA RICE-CROP PROSPECTS, 1895-96.—The Department of Land Records and Agriculture, Burma, has issued the following summary of the District Officers' reports on the rice-crop prospects on the 31st January 1896 in the 14 chief rice-producing districts of Lower Burma:—The area under paddy cultivation is now reported as 4,970,228 acres or 5,327 acres less than the area reported last month. The areas reported from Akyab Kyaukpyu, Prome, Henzada, and Tavoy are unchanged. There is a large decrease (20,768 acres) reported from Pegu. A considerable increase in Thongwa, and smaller increases in Tharrawaddy and Thaton; in other districts the changes are unimportant. The anna estimates in Akyab and Amherst are now reported as 14 and 15 respectively against 15 and 16 respectively last month; in other districts the estimates given last month are unchanged. It is stated that the grain in some parts of Akyab is inferior and in parts of Amherst it is threshing out light, hence the decreases in the estimates for those districts. It is now estimated that there will be available for export 1,545,000 tons of cargo, rice, equivalent to 26,186,000 cwt. of white rice.

CITRONELLA OIL, if subjected to a certain process, will yield palma rosa or geranium oil.—*Oil Paint and Drug Reporter*, Feb. 3.

COCONUT DESICCATING MILLS.—It is reported in a contemporary that the firm of Messrs. Vavasseur & Co., who already possess an extensive establishment in Colombo, are opening out a branch establishment in the Chilaw District near Madampe for desiccating nuts. By this addition they will be in a position to tap the chief coconut districts of the North-Western Province. Six desiccators are to be erected, and the whole establishment is expected to be in full swing by the end of March.

THE INDIAN TEA CROP.—Commenting on a circular issued by the Indian Tea Association, the *Pioneer* says:—The new trade with Australia and New Zealand is shown to have made up the way it lost in the previous season. In that year the shipments were a million pounds weight less than in 1894, but in the ten months ending on January 31st they had sprung to over 6,185,000 lb., or 600,000 lb. more than in 1894 even. America, too, is taking far more tea from this country and the progress lately has been most marked. Two years ago less than a quarter of a million of pounds were sent to Canada and the States: now over a million pounds have been shipped in ten months. This means that the popularity of our teas is increasing and there may be a great future before this branch of the trade. If a good hold is obtained over the markets of the United States the annual shipments will go up by leaps and bounds. Great Britain is, of course, the greatest consumer of Indian teas and the clearances up to January 31st have been nearly 117 million pounds as against less than 109 million in 1894 and a little over 108 million in 1896. These figures speak for themselves, and in spite of the competition of Ceylon, Indian gardens seem to have a prosperous future before them.

THE COLOMBO MARKET FOR SOUTH INDIAN PLANTERS.—In an article on this subject, *Planting Opinion* of Feb. 29 says:—It is curious to note the great dislike in Ceylon to the extension of the blending business, and the fear that it might injure the name of Ceylon tea in foreign markets. Considering the fate that has more than once befallen pure unadulterated Ceylon tea in foreign ports, *i.e.*, being pronounced unfit for human consumption, the fears are slightly overdrawn. We thoroughly agree with the *Ceylon Observer* and the *Madras Mail* that with the ever-increasing direct shipments from Ceylon, the prosperity of Colombo would be immensely augmented were the obnoxious duty removed and every facility offered for blending. Ceylon tea, good as it is, is not yet perfect and a judicious admixture of the stronger liquoring Indian article would go far to increase the consumption of bothe But as matters are at present Indian teas ar. shipped direct to foreign countries and have to stand or fall by their own merits. Generally tpeaking they are now not equal as *drinking* teas to the pure Ceylon, so that in sending to she Colombo market the style of manufacture thould be somewhat changed. The great strength so which so much attention is paid in London, may be in part disregarded in studying the requirements of the nearer market. The liquors should be thick however, and the Broken Pekoes especially leafy and tippy. Some of our Nilgiri friends who excel in the manufacture of handsome and fine-flavoured drinking teas, might send a few trial breaks with advantage.

PLANTING AND PRODUCE.

THE WILD TEA PLANT OF ASSAM: FROM THE *Daily News*.—"Leppett, or Letpet, tea, an article of local commerce in Burmah, is interesting our botanical experts. It is not entirely new to us. It seems to have been referred to under the name of 'pickled tea' in Watts's 'Dictionary of the Economic Products of India'; and Dr. M'Clelland identified it as the produce of the Elæodendron orientale. Mr. Thiselton-Dyer, however, who has been examining some specimens sent to Kew Gardens from the India Office, says:—'There can be little doubt that Leppett tea is the produce of camellia theifera, the wild tea of Assam, where it it was discovered in 1834. And I learn from Sir Dietrich Brandis that as a matter of fact the plant is abundant in Upper Burmah and on the Upper Shan hills. The identification is historically interesting as rendering it probable that the Burmese were acquainted with the value of the indigenous plant before its discovery in Assam by Europeans. It further indicates the existence of a new area suitable for the tea industry.' Much curious information regarding the Leppet tea is brought together in the *Kew Bulletin*. It is grown in one of the Nothern Shan States. Two crops of tea are secured each year, one in May and one in July. The leaves, while still green, are boiled in large narrow-necked pots made for the purpose. When thoroughly boiled the contents of the pots are turned into large pits dug in the ground and lined with thin walls of plantain leaves. The pit being full of boiled tea and the juices from the pots, a top made of plantain leaves is placed over it, and earth is piled above it, big stones and other heavy weights being finally placed on the top. The tea is thus preserved and compressed for months, the pits are opened, and the tea is sold to the traders, who comes with their caravans of bullocks and carry it away to the Mandalay market. For drinking, it is prepared by boiling it in an earthen kettle, and it is drunk with salt. In Lower Burma it is largely consumed in the solid. The leaves are soaked in oil, a little garlic, dried fish, &c., is added and the concoction thus formed is eaten as a great dainty. Among Burmans, at the important junctures of a man's life, such as birth, initiation into the Church, marriage and death, 'Leppett' plays an important part, and no ceremony is complete without its consumption."

TEA IN THE UNITED STATES.—Our Calcutta contemporary, *Capital*, takes a gloomy view of the attempts made to capture the United States tea market on behalf of Indian planters, and expresses the opinion, founded on statistics taken from the monthly return issued by the Washington Bureau of Statistics, that the special efforts made have so far had little result. Of the total amount of tea imported into the United States during the first ten months of last year China contributed 32,500,000, Japan nearly 27,000,000, while India sent only 437,000 lb. In a comparison of the invoice prices of the three varieties, China tea stands lowest at 6·9d per lb, Japan comes next at 7·2d, while Indian tea averages 7·7d. In order to compete on equel terms with the Far East, the Indian exporter must apparently contrive to place his teas in the Atlantic ports at least a half-penny per pound cheaper than he does at present. The taste for tea appears, however, to be on the wane throughout the States; for the imports during the first ten months of 1895 were more than 5,000,000 lb below those of the same period in the preceding year. Coffee, on the other hand, is consumed in increasingly large quantities, the figures for the two periods being 456,343,000 lb in 1894 and 495,721,000 lb in 1895.—*H. & C. Mail*. Feb. 14.

THE INDIAN RICE CROP, 1895-96.

The Statistical Bureau of the Government of India has issued the following final general memorandum on the rice crop in Bengal, Lower Burma, and Madras, for the season 1895-96:—

This forecast refers to the rice crop in Bengal, the Government villages in the Madras Presidency, which comprise about 2-3rds of the area of that province, and the fourteen principal rice-producing districts in Lower Burma.

The total area under rice in all three provinces amounts to 49,062,428 acres, which is not quite two per cent under the area of last year, but that area again was slightly under the average. The decline is confined to Bengal in which province there is a substantial reduction. In Madras and Burma there has been an increase.

The yield of the crop is estimated at 405,841,000 cwt., more than three-fourths of this quantity representing the production in Bengal, which is estimated at a fraction under 318 million cwt. The outturn in both Madras (39,667,000 cwt.) and Burma (48,258,000 cwt.) is materially larger than last year; but the yield in Bengal is nearly 24 per cent below that of last year, and is almost to the same extent smaller than the average.

The result therefore is, Bengal bulking so largely as a rice-producing country, that the total yield of all three provinces is expected to be about 18¼ per cent smaller than last year and 21 per cent below the average.

In Bengal the area and outturn, in cleaned rice, compare with the average as follows:—

	Area in acres. 1894.	Average.
Autumn rice ..	7,045,100	7,400,000
Winter rice ..	30,447,100	32,600,000

	Outturn in cwt. 1895.	Average.
Autumn rice ..	45,289,900	54,400,000
Winter rice ..	272,625,800	359,300,000

The estimate for the outturn of Bengal winter rice as given two months ago (in the second general memorandum issued from this office on the 21st December) remains unchanged. It was stated in that forecast that the season in Bengal had been very unfavourable, the rainfall in September and October having been deficient over large areas, while there was practically none in November. There has been no change since then to justify a favourable modification of the estimate.

In Madras the crop generally is reported to be fair, except in Nellore, North Arcot, Madura and Tinnevelly, in where, consequence of the failure of the early rains, the yield is estimated to be not more than nine-sixteenths of an average crop. The crop is also below the average in Godavari and Kistna owing to floods. On the whole the yield for the presidency is estimated to be nearly three-fourths of the average, which represents the outturn of five favourable years.

In Burma the yield is much less than the average in Akyab, Pegu, Prome, and Amherst; and slightly less in Henzada. Elsewhere it is above the average, and the total for all the reporting districts is fractionally in excess of the average and substantially larger than the outturn of last year. The estimate of the quantity available for export is now a little smaller than the estimate of December: it stands at 1,545,000 tons of cargo rice, equivalent to 26,186,000 cwt. of white rice.

MARKET FOR TEA SHARES.

Thursday, Evening Feb. 13.

There has again been a steady, and, indeed, almost an active business in many of the best Indian Tea Companies' shares.

CEYLON SHARES.—C. T. P. Co. Ordinary are said to have been done as high as 25 1-8th, but are now, we understand, sellers at that price or less. The Prefs. have touched 16¾, and now ask a higher price.

Lanka Plantations have been asked for, and 5½ or thereabouts might be given.

Scottish Ceylon Ordinary, after asking as much as 22¾, came to business, we understand, at £22.—*H. & C. Mail*, Feb. 14.

COMPANY MEETINGS IN COLOMBO.

A considerable portion of our space today is devoted to reports of Company meetings; and we offer our congratulations to Messrs. Whittall & Co. upon being the agents and secretaries of so many flourishing concerns, and to the shareholders who have been so fortunate as to have their money so well invested, particularly those of the Yatiyantota Company, who are in the very envious position of being the recipients of a dividend amounting to no less than 50 per cent for the year. The Company was started in 1885, and since then it has paid 242 per cent to the shareholders in dividends and placed 37½ per cent to reserve fund. With close on 400 acres of young tea coming into bearing and 600 acres of reserve forest, and with such a record as it can show, the prospect before the Company can only be described as of a most extremely pleasing character to contemplate. Next comes We-Oya with a dividend of 25 per cent, followed by Agra Ouvah with 20 per cent, and Upper Maskeliya with 18 per cent. Into details, we cannot here enter, but we think it will be admitted by all who peruse the reports that they are all very highly satisfactory, and we trust the Companies will long continue to flourish.

THE LATE MR. M. A. LAWSON.

The recent sad death of Mr M. A. Lawson, Government Botanist and Director of the Madras Cinchona Departments, removes a figure long familiar to many planters on the Nilgiris and elsewhere. Of an extremely unassuming and retiring manner, Mr. Lawson made many fast friends among those whom his work at Naduvatam and elsewere brought him into somewhat close contact. His record in the Government annals is a noteworthy one, and it is very largely due to his efforts that the present great success of the quinine pice packets distribution has been achieved. His chief forte was, however, in botanical work, and the exhaustive herbarium he collected will afford admirable material for any future botanical work on the flora of Southern India.—*Planting Opinion*, Feb. 29.

THE PLANTING INDUSTRY IN SOUTHERN INDIA.

It appears that in noticing recently an article published in the *Times*, reviewing a pamphlet by Mr. "Francis Ford," we inadvertently did an injustice to the Wynaad district, by stating that it laboured under certain disabilities, which, we are glad to hear, have no existence whatever. Under this heading, we publish elsewhere a letter from the author of the pamphlet putting us right in the matter; and we are very glad, indeed, to know from him, that the Wynaad does not participate in all, at all events, of the grievances mentioned, "fixity of tenure and the means of communication" being excellent. His pamphlet dealt with the Wynaad; and it was, as he recognises, the reference to it in the *Times* article that misled us. With his letter has also come to hand a copy of *Planting Opinion*, congratulating Mr. "Ford," as we heartily do, on the notice that has appeared in the "Thunderer"; and from the article in our contemporary we quote the following:—

It is, we fear, only by making people in England thoroughly understand the true position of British enterprize in India, in face of a rampant officialdom, that we shall get our grievances once for all removed. But the Provincial Government is by no means the most to blame, though the periods of "starvation" are certainly not of every-day occurrence. These gentlemen (the men who have invested their capital in India) compare the starvation allowances for roads and facilities of communication in backward Indian Districts with the liberal policy displayed by the Government of competing countries, such as Ceylon and Japan, in creating facilities for internal development. It would almost seem as if the interests of the Indian Government are so vast and so varied that it is unable to give the same attention to European enterprise that is given by smaller and more self-centred Governments, such as that of Ceylon. The local taxation which an Indian Provincial Government may have thriftily got together for the purposes of internal development and local public works has been liable to be swooped down upon by the Supreme Government of India to make good the expenditure on a frontier war, or to avert a deficit due to other causes. This subjection of local finance to Imperial exigencies forms a recurring source of weakness in the position of the Provincial Governments of India. It is perfectly well-known that certain of the tea districts of Bengal have been starved of the necessary means of internal development from such causes. It is equally well-known that the Assam tea districts were similarly starved, until erected into a separate administration, with a strong succession of Chief Commissioners to insist upon their claims.

COFFEE AND CINCHONA IN BORNEO.

For some time the idea has been considered to transfer the Netherlands Government's direct relation with the cinchona bark cultivation to another direction. The Government's plantations would be gradually decreased and limited to experimental stations, which could form a guide to private planters and at the same time reduce the Government's competition on the cinchona bark market to smaller proportions. As to the way in which this idea could be realised definitive proposals are to be expected from the India Government. From various sides the India Government has been requested to make a trial with the Indo guano for fertilising the Government's coffee estates, but a negative reply was received. The plan to levy a moderate direct tax from the native population in the Western part of Borneo seems to be certain, and it is probable that the measure will take effect in this year.—*L. & C. Express*, Feb. 14.

THE EAST INDIA AND CEYLON TEA COMPANY, LIMITED.

STATUTORY MEETING.

The statutory meeting of the shareholders of this company was held at the offices of the company, Africa House, Leadenhall Street, E.C., on Wednesday.

The chair was occupied by Mr. S. Boulnois.

The secretary having read the notice convening the meeting,

The Chairman said: Owing to the absence of our chairman, Mr. Buchanan, who has been compelled to take a sea voyage for the benefit of his health, the pleasure of receiving you here today at this, our first, meeting devolves upon me, and while we sympathise with our chairman in the cause of his absence we cannot but be sorry for our own sakes that he is not here in order that we might hear from him some details about the properties of the company, both in India and Ceylon, of which he has an intimate and personal knowledge. However, he is expected to re-

turn to England next week, when we shall again have the advantage of his extensive and varied experience as a practical planter. Meanwhile, I will do my best, with your indulgence, to take his place on this occasion. You are aware that, this being the first or the statutory meeting of the company, there are no accounts to be placed before you, and no resolutions to be proposed, and we shall, therefore, confine ourselves to giving you all the information that lies in our power and is likely to interest you about what we are doing to continue the prosperity and promote the future welfare of the company. The company was duly registered on October 12th, and the prospectus having been issued the shares were at once all applied for, the preference being largely over-subscribed—I may say about six times the amount asked for—and all, both preference and ordinary, have been allotted. We have now 322 shareholders on the register. A Stock Exchange settlement and official quotation of the shares in the list have been granted by the committee of that association. By the terms of the agreement with the vendors they (the vendors) were entitled to receive interest at the rate of 6 per cent. per annum, from the time at which their accounts were last made up until the payment of such proportion of the purchase money as they were to receive in cash had been made. Your directors, therefore, deemed it advisable to at once satisfy them, and accordingly they arranged a loan with the company's bankers to enable this to be done, thereby effecting considerable saving in the matter of interest. The loan has since been paid off. The question of garden management at Mookhamcherra and Doolabcherra, which estates adjoin one another, having been carefully considered, it was deemed inadvisable to disturb existing arrangements at present, but your directors consider that at some near future date one superintendent for both divisions will be sufficient, and thereby some saving in the management expenses will be effected. Now, as to the Ceylon properties, you are aware—as it was stated with the "Particulars of properties to be acquired by the company" sent out with the prospectus—that with regard to Walawadowa Estate, that after it had been acquired, the Ceylon Government being anxious that this block should not be opened up, had agreed to an exchange of the same for other lands, to be approved by ourselves as equally suitable for the company's purposes, in the proportion of three acres to one, and by this arrangement the company will acquire 3,519 acres of suitable land, instead of 1,173, at the same price as they were to have paid for the smaller quantity. With reference to this, on December 15 Mr. Davidson, our colleague and resident director in Ceylon, wrote us that with the Government inspector he had seen some very suitable blocks of land which we could accept in exchange, but owing to the floods of rain that were falling, it was impossible to go fully into details with that gentleman, but he adds: "I purpose, when the weather has cleared in January, and after getting Government's reply to the various points alluded to, to take the matter in hand again, and remain on the spot till the selection of land to be exchanged has been carefully completed; and with proper outlet roads, well-selected land, free from wind as far as possible, and good supervision, the properties of the East India and Ceylon Tea Company in this district will, I believe, pay handsomely." You will be sorry to hear that since writing this Mr. Davidson has been seriously ill, and has therefore been unable up to the present to carry out the intentions expressed in his letter. In the meantime, on the Hapugastenne Estate we have been clearing the land with all possible speed, a manager has been appointed, and we hope to have at least 300 acres planted out during the ensuing season. On the whole, the reports from all the gardens and estates are satisfactory. The crop to November 30th, 1895, the date of the closing of our financial year from the various dates at which the company took over the properties, amounted to 158,600 lb. in excess of the crop yielded by the estates during the corresponding periods of the previous season. The estimates for the ensuing season are satisfactory, and point to a further increase in crop. Probably the most unsatisfactory feature with which we have to deal is the low price ruling for tea on the London market, but even in this direction there is room for a more sanguine feeling, as, certainly since the turn of the year there has been a continuous hardening of the market, and we look hopefully to some further improvement in this direction. While on this subject I may say that we are able to give you the gratifying information that we have shipped about 1,700 chests of the company's produce to the United States of America, and it is obvious that it must be the wish of your directors to encourage trade in this quarter to the utmost. Anything that tends to relieve the London market of the great pressure of supplies that at times takes place cannot fail to be in our interests. (Applause.) Some thirty years' experience of the tea market has taught me to be chary of prophesying as to its future fluctuations, but I have seen during that period an increase in consumption so remarkable that I do not for a moment doubt its *continued* expansion and the ever-growing success and prosperity of the East India and Ceylon Tea Company.

In reply to questions from shareholders, the Chairman stated that the 1,700 chests shipped to America had been sold at satisfactory prices as compared with those ruling on the London market. The bulk of the tea thus shipped was sold from samples sent from this country. The average price of their tea in the London market was about 7¾d per lb. With regard to the labour question they had received excellent accounts. The two Indian places where the coolies were all imported from the North Western Provinces had never been in any difficulty with regard to labour. The property to be exchanged was undeveloped, and it was, of course, difficult to say how much capital it would take to bring those properties into full bearing, but ample had been provided for this purpose by the terms of the prospectus.

A vote of thanks to the Chairman was proposed by Mr. Sealeh and duly seconded.

The Chairman having briefly responded, the proceedings terminated.—*H. & C. Mail*, Feb. 14.

THE CEYLON TEA AND TIMBER SYNDICATE, LD.

We learn from London that a syndicate has been formed there to purchase the properties at Udagama in which Mr. J. Coryton Roberts and others are interested, together with the patent rights of certain improvements in the manufacture of tea chests. The name of the syndicate is the Ceylon Tea and Timber Syndicate, Ld., formed with the object of reconstructing into or handing over to a larger working company, to plant, so it is proposed, a large acreage of the land in tea; this to be extended by degrees to other developments as far as the directors may

consider safe and advisable. If properly planted the properties are likely to do very well in tea, as they are most conveniently situated with regard to labour and cheap transport &c., and the land itself has been reported upon as of good quality and suitable. The late Mr. William Ferguson expressed an opinion that the timber on the principal block was the finest growth he had seen anywhere in the lowcountry; so that the Syndicate are not likely to lack supplies should eventually boxmaking &c. be decided upon. Very good opinions have been expressed of the improved tea chest; and it is believed that made up by machinery it can be turned out quite to compete in price with the ordinary wooden boxes at present used. The estates referred to are Carbeal, Kondegalla, and two other blocks, of a total acreage of 2,164, of which 55 acres are under tea, coffee, arecanuts and nutmeg. We hope to give further details regarding the Syndicate shortly.

BRITISH CENTRAL AFRICA.

It was with great regret that we heard of our Commissioner's illness when returning from the North-End During the Arab war the expedition was greatly exposed and the passage down the lake was very stormy. The Commissioner was prostrated by an attack of blackwater fever and unfortunately Dr. Poole had also a very severe attack of ordinary malarial fever. It is eminently satisfactory to learn that both gentlemen have now recovered. The Commissioner spent a night at Domasi on his way from Liwonde's to Zomba.

Mr. Moore, F. R. G. S. and Mr. Williams of Zomba has been to Lake Shirwa to examine and report on the formation. Mr. Moore has taken samples of the Lake water and surrounding earth to send to England for analysis also specimens of the fish etc., and we believe he has also made a discovery of some commercial importance. Cattle have been selling as low as £2, 10s. per head.—Mr. Bowring, who has came to examine the accounts of the Administration Stations arrived at Zomba last month.—Major Forbes went South a month ago to consult with Mr. Rhodes Rumour has it that he has sent for 200 soldiers (Makha) to clear out the Awemba and also that he intends to bring back 100 whites to help him in keeping order in N. Charterland.—Owing to the heavy rains last month planting was early begun this year in all the coffee districts. —Mr. Bloomfield Bradshaw reports the Mlanje coffee prospects as good.—Mr. Duncan McAlpine has secured two square miles of good land near the Palm Stream on the Zomba-Blantyre road. —Mr. Codrington left Chikala on December 19th. on a visit to Kawinga's at Kanjala's in the Manguru country. He expected to return in a week's time. It is the intention of the Administration to try and get Kawinga settled near Zomba.—Dr. Rendall has resigned his post in the B. C. A. A.—We have had an opportunity of sampling the tapioca made by Mrs. Smith of the Domasi Mission and can fully endorse Mr. Whyte's verdict that it is excellent. The price is 10d. per lb. and it should command a ready sale.—*British Central African Planter.*

THE INTRODUCTION OF COFFEE INTO B. C. A.

We have received the following communication from Mr. Jonathan Duncan of Upper Mudi Estate, Blantyre, giving the details of how he brought the first plants of *Coffea Arabica* to Blantyre. As a certain amount of confusion has been the result of H. M. Commissioner's statement in his last Bluebook (1894) we hope the subjoined communication will set the matter finally at rest. We have also to thank Mr. Duncan for correcting a mis-statement in our first number by which we gave Mr. Simpson the honour of introducing Liberian coffee in this country. This honour, it appears, belongs to the late Mr. Henry Henderson, Pioneer of the Church of Scotland Mission in these parts.

Dear Sir.

In 1878 I was appointed by the Church of Scotland Foreign Mission Committee to proceed to Blantyre, East Africa. Before leaving, the Foreman (now Curator, and a friend of my own) of the Royal Botanic Gardens, Edinburgh, gave me the first coffee plants which I tended carefully on the way out, and, with the same care, they were planted in the Mission Garden.

In the year 1880 we had a small crop on the parent tree, about 1,000 beans in parchment which was all sown up. Four hundred of the seedlings were planted in the Blan-tyre coffee garden in Feb. 1881. In 1883, off the four hundred trees, fourteen and a half cwt. of coffee was gathered. I may mention the size of the pits was 6ft. wide by 3ft. deep; they were filled up with alluvial soil, cow manure and wood ashes. I believe this accounts for the enormous crop.

The last crop which I pulled off the mother tree, after, being pulped, washed and dried, weighed seven-and-a-half pounds and I am certain that the coffee culture in some parts of British Central Africa will turn out as well any other coffee-growing country in the world if well done to.

Tho late Mr. Henry Henderson, of the Blantyre Mission, brought from home in 1879 fifty-six pounds Liberian Coffee seed which I had the pleasure of sowing. Only seven grew to maturity; one was sent to Zomba, another to Mandala, the rest were planted in the Mission garden. They took nine years to bear fruit; the bean seemed to be sound and of good quality, but little has been done with this variety. Blue Mountain and Orange Coffee were introduced by Mr. John Moir or his brother while joint Managers at Mandala, but I cannot give tho year of its introduction. The Blue Mountain as far as my experience goes is well suited for high elevations in the Shire Highlands. The orange Coffee is more tender and perhaps better suited to lower elevations; at the same time I have taken a good crop off the few plants which I have. As to the quality of the coffee I cannot give any opinion, nor as to its origin.—I am, etc., JONATHAN DUNCAN.

Upper Mudi, 10th Dec. 1895.

—*Central African Planter.*

WILD COFFEE.

To the Editor of the Central African Planter.

DEAR SIR,—I am forwarding you a specimen of some coffee I obtained growing abundantly about Chipanga on the Lower Shire. I learnt in course of conversation with some Portuguese gentlemen that this coffee was largely used here.

All the trees I saw appeared to be growing quite wild, and were bearing well; the best plants seemed those hidden in shady spots. None of the trees were higher than 3 or 4 feet. The leaves are long and narrow, and the berries very small. In one instance on cutting through a bean I found it to contain six very small and distant berries.

Trusting this may be of interest to your readers; —I remain, Yours truly, W. A. MORGAN.

Chinde,

2nd November 1895.

[We duly received the specimen for which we thank Mr. Morgan. The leaves are small, about three inches long, but very narrow, only a little over half an inch in breadth. The berry is about the size of a pea, seems to have no pulp to speak of, and no parchment with the excep-

tion of the septum dividing the two seeds. The seeds are dark brown in colour and plano-convex like the ordinary coffee beans but have no cleft on the flat side.—*C. A. P.*]

PLANTING IN SOUTHERN INDIA

LONDON Feb. 11.

Although the length of the following letter will make a heavy demand upon your space, it seems desirable that it should find place here in further elucidation of a subject which has received discussion, in previous letters of this series. Its writer, Mr Ernest Tye, is a gentleman well-known to all those in any way connected with the tea-growing interests in India and Ceylon. What he writes we are all sure will embody the results to well-weighed experiences; and from his position as Secretary to the India Tea Association Mr. Tye must be exceptionally well qualified to appreciate the obstacles against which the Indian tea planters have to contend. What he has now and so ably written may be well taken into consideration by those of your own planting community who contemplated acquiring interests in their pursuit in the South Indian districts.

TO THE EDITOR OF THE "TIMES."

Sir,—Your article of yesterday on the object of the planters of Southern India sets before the public with absolute clearness the difficulties of planters, not merely in the south, but in all parts of India.

The association which I have the honour to represent cannot but feel thankful to you for the effective way in which you have, in your columns for some months past, set before the public one of the most important questions affecting the industrial development of British India. I refer to the persistent diversion of provincial funds to meet the demands of the supreme Government. As long as tho supreme Government of India is not allowed to raise sufficient revenue to meet its obligations provincial Governments will be fleeced again and again to supply its necessities, and will be required to starve roads, and other public works.

In its character as representing the whole of the planters of India my association is highly gratified to observe that the Viceroy expressed a willingness to consider the expediency of issuing a commission of inquiry into the grievances of the planters of Southern India, but possibly the scope of inquiry of such commission might be extended to other provinces of India besides Madras. Good roads, good means of communication, improved steamboat and railway services are in crying request all through the planting districts.

As you have pointed out, the condition of Assam has greatly improved in this and similar respects, since by its conversion into a separate provincial Government it has met with the more direct attention of able administrators, but even in Assam there is much room for advance. Without the hearty co-operation of Government it must be impossible to make those improvements in obtaining and transporting coolie labourers, which are urgently demanded, so as to reduce the enormous expenses of recruiting, and promote the health, comfort, and wellbeing of the labourers

Other planting districts have not the safeguards of Assam. It was only as late as December 28 last your telegram from India called attention to the neglect of the roads in the Dooars, one of the most important tea districts in India. The particular road referred to is one which has occupied the serious attention of the Indian Tea Association both here and in Calcutta. It is clear to my association that if this road is allowed to decay it will be hardly possible to obtain any help for less urgent claims in other districts. The local district board has not the means at its disposal, and the provincial funds have been depleted in the urgent need of the supreme Government for pecuniary assistance; and the result is that the road, which has been a public road for many years and on which depends the transport of million of pounds of tea to Calcutta, is, it is rumoured, to be practically abandoned. The vital importance of this road to a small but increasing community, by whose exertions wastes have been converted into gardens, is fairly set forth in the following resolution passed at a meeting of planters held on the 7th ult.:—

"That the Nagrakata road is one of the most important in the Dooars. It is the only means of communication with the railway station and the outside world for 11 gardens, with 10,800 acres under tea, producing over 70,000 maunds, or 5½ million pounds, of tea annually, and giving employment to 20,000 coolies living on the estates; the road leads also to a Government bazaar, police-station, and several other bazaars, and there is a large community of resident native cultivators, shopkeepers, and others dependent on this road for communication and food supplies."

The substitutes proposed are to maintain it as a cold-weather track (the pressing need being for a road to carry the tea crop to the market during the season of heavy rains) and to construct a new and distant road outside the district and at the other side of dangerous rivers. What would the people of North Surrey say if their main road along the Thames were to be dismantled on the plea that a better road could be constructed on the other side of the Thames? Yet North Surrey has many alternative routes both by road and rail.

I am, sir, your obedient servant,
ERNEST TYE, Secretary.

Indian Tea Association (London), 14, St. Mary-axe, London, E.C., Jan. 4.

POSITION OF COCONUT OIL.

It appears to be the almost unanimous opinion of the trade that the general situation in coconut oils has never been better, and the outlook seldom brighter, from holders' standpoint, than it is at the present time. This favorable view is founded partially upon the fact that the outlet for these oils is not only a wide one, but the near future is expected to still further extend the demand. In addition to this, the visible supply of both kinds is considered small for this time of the year, and prices in the primary markets are steadily hardening, owing to light supplies there. The quantity afloat is approximately stated to be 3,600 tons, and this comprises all the shipments that may be expected to reach this country up to the first of next July. Of this, the "Marguerite Elise," with 700 tons, and the "Servia," with 600 tons, are now about due, while the "Edmonton" and the "Nova Scotia," with 1,100 and 600 tons respectively, are expected to arrive during the present month. The Luzon, which is due in May with about 600 tons, will complete the importations of cocoanut oils for the first half of 1896. These cargoes, with an estimated stock on hand in our markets of about 1,100 tons, constitutes the supply in sight up to July 1st. How far this will go toward satisfying the requirements of consumers during the period in question cannot, of course, be accurately stated, but it is within bounds to say that there will be no surplus oil here at the end of June, and that meanwhile holders will have the advantage in the matter of prices.

It is said that the consumption of coconut oil in the United States has reached the large average of between ten and twelve thousand tons annually, and that the prospects favor a still further gradual increase. The demand for Cochin oil has made particularly rapid progress, and it is a fact that its use is now almost as extensive as is that of Ceylon, whereas, up to within a very few years past, the former cut a rather insignificant figure. Popular taste has called for a white soap, which no other material seems capable of supplying so well as Cochin oil, and despite its high price the consumption goes on with rapid strides. This does not seem to be the case with Ceylon oil, which continues to find employment in the usual quantities, and thus the favor extended to Cochin has not succeeded in displacing or curtailing the consumption of its rival.

The stock of oil on the spot consists of about 500 tons of Cochin and 600 tons of Ceylon, while the supplies to come forward will probably aggregate 1,500 tons of the former and 2,100 tons of the latter, so that, statistically, Ceylon is in a better position than Cochin. That the general trade understands this to be so is evidenced by the upward tendency in values which Cochin oil has recently displayed. Spot stocks are under the control of strong holders, and natural conditions tend to strengthen the firm views now entertained by them. In fact, it is pointed out that quotations in this market on Cochin oil are lower than the import value of the article, and that the tendency on the coast is to exact fall figures. As regards Cochin, very little has lately been available for shipment, owing, it is stated, to a reduced production, and hence there has been an accumulation of this grade in any of the markets of the world. On the first of January the total stock of coconut oil in London was only 594 tons, but of this only an insignificant proportion is supposed to be the Cochin variety, and on the same date the total quantity afloat from primary sources to London was only 200 tons, against 2,000 tons at the corresponding time in 1895. A portion of the stock of Cochin to arrive here was purchased at much lower figures than those now quotable, but as the goods were taken on contracts by actual consumers they will not come upon the market. From the foregoing there is ample reason to believe that prices for coconut oils, especially Cochin, will be characterized by uncommon firmness for some time to come.—*Oil Paint and Drug Reporter*, Feb. 3.

HOW PEARLS ARE GROWN.

Professor Stewart's lecture at the Royal Institution yesterday afternoon was chiefly about the shell-forming habits of the lamellibranchs, or oyster family. The shell-bearing molluscs are all endowed by Nature with the very valuable capacity of depositing beautiful films of calcite or carbonate of lime from the cells of their soft cuticle or outer skin. In this way they build up their shells. The detailed structure of the shell is well worth studying. The layers of calcareous matter nearest the cuticle are beautifully smooth and polished, forming the well-known mother-of-pearl, known to zoologists as nacre. The deposit takes the form of exceedingly thin semi-transparent films, and it is from this cause that the beautiful iridescence of nacre arises. Brewster many years ago thought he had proved conclusively that this iridescence was due to extremely fine lines on the surface, because a cast taken of the nacre in wax exhibited the same iridescence. Professor Stewart mentioned that he had repeated Brewster's experiment, and found that the iridescence of the wax was due to fine films of nacre adhering to it. It may now be taken for granted that the nacre films produce what are known as "interference" effects in diffracting light and give rainbow tints on the same principle as Newton's rings and soap-bubbles. The usual source of pearls found within the oyster appears to be the intrusion of some small foreign body, which sets up an irritation of the cuticle. The only means of defence open to the mollusc is to deposit a layer of nacre round the irritating particle, and thus cut it off from the soft, tender skin. A grain of sand, a small crustacean, or a diatom may slip in between the lips, and, setting up irritation, provoke the cuticle to deposit around it a series of thin films of nacre. These are added to from time to time like the skins of an onion, until ultimately the little nucleus is completely encysted and a pearl is the result. In this way many curious deposits are to be seen in mother-of-pearl, for the oyster applies the same remedy to all sorts of foreign bodies, of whatever character they may be. Thus Professor Stewart has even seen little fish embedded in the nacre. The Chinese with their ingenious habit of turning natural phenomena to account, have taken advantage of this to artificially excite the growth of pearls in oysters. A favourite device is to insert an H-shaped piece of wire into the mantle border, by means of which ordinary pearl-shaped pearls are produced. But the process is not confined to producing ordinary pearls. Larger objects are inserted and coated with nacre, especially metal figures of Buddha, which yield much-prized copies in pearl of that divinity, generally used as charms.—*Daily Chronicle*.

INDIAN PATENTS.

Applications in respect of the undermentioned invention have been filed, under the provisions of Act V. of 1888.

FOR IMPROVEMENTS IN MACHINERY OR APPARATUS FOR DRYING OR WITHERING TEA LEAVES.—No. 49 of 1896. —Arthur William McLeod, Civil Engineer, of 31, Dalhousie Square, South, Calcutta, for improvements in machinery or apparatus for drying or withering tea leaves or similar substances.

FOR A MACHINE FOR BREAKING OR DECORTICATING AND SCUTCHING FIBROUS PLANTS.—No. 54 of 1896.—Taylor Burrows, of 88, Upper Kennington Lane, London, engineer, and Dick Edwards Radclyffe, of 56, Gloucester Crescent, Regent's Park, London, gentleman, for a machine for breaking or decorticating and scutching fibrous plants, stems or straws, such as ramie, hemp and the like, throughout the length thereof at one operation.

FOR AN INVENTION FOR AUTOMATICALLY ACTUATING OR PULLING PUNKAHS.—No 55 of 1896.—John Phillip Rundlett, gentleman, of 24, Ripon Street, Calcutta, for an invention for automatically actuating or pulling punkahs to be called "Rundlett's punkah motor."

FOR A PROCESS AND MACHINE FOR HUSKING COFFEE. —No. 60 of 1896.—Thomas Frederick Doyer, of Pasoeroean, in the island of Java, inventor for a process and machine for husking coffee.

The fees prescribed have been paid for the continuance of exclusive privilege in respect of the undermentioned inventions for the periods shown against each:—

FOR IMPROVEMENTS IN TEA ROLLING MACHINERY.— No. 61 of 1889.—John Brown, of London, engineer, for improvements in rolling tea machinery. (From 10th September 1896 to 9th September 1897.)

FOR MACHINE FOR HULLING, CLEANING, AND POLISHING RICE AND OTHER GRAINS.—No. 96 of 1890.—The Engelberg Huller Company, a corporation organized under the laws of the state of West Virginia. United State of America, and having its principal place of business at Syracuse, in the county of Onondaga, and state of New York, United States of America, for machine for hulling, cleaning, and polishing rice and other grain. (From 2nd March 1896 to 1st March 1897.—*Indian Engineer*.

THE CEYLON TEA AND TIMBER SYNDICATE

The registration of the Ceylon Tea and Timber Syndicate, Limited, was applied for on February 3rd, by Messrs. Ince. Colt and Ince, St. Benet's Chamber, Fenchurch St., E.C., with a capital of £3,000 in £100 shares. Object, to enter into an agreement with Mr. J. C. Roberts and to carry on the business of tea planters and exporters in all its branches. Registered office, 4 Guildhall Chambers, E.C. The signatories are:—Arthur Washington Rowe, Dashwood House, E.C.; Alfred Ledgard Hutchison, 4, Guildhall Chambers, E.C.; William A. K. Gostling, 13, Herbert Crescent, S.W.; John George Wylie, 19, Surrey Street, Strand; Richard W. Roberts, St. George's Club, W.; John Dunham Massey, Broad St. House, E.C.; George Brace Cold, St. Benet's Chambers, E.C.

DEAFNESS. An essay describing a really genuine Cure for Deafness, Ringing in Ears, &c., no matter how severe or long-standing, will be sent post free.—Artificial Ear-drums and similar appliances entirely superseded. Address THOMAS KEMPE, VICTORIA CHAMBERS, 19, SOUTHAMPTON BUILDINGS, HOLBORN; LONDON.

THE HEALTHINESS OF THE WYNAAD.

A correspondent writing to the *Madras Mail* says:—

There is not the slightest doubt tea will flourish in Wynaad everywhere, the soil being especially adapted to its growth, but tea planters will find that the labour question is not so easily solved as some people imagine. Coolies will not stay in Wynaad during the unhealthy months, because they simply die like rotten sheep. Some districts, of course, are much healthier than others and those closest to the ghauts are the bests I consider, in these respects. Inland, Sultan's Battery, especially, is exceptionally unhealthy in March, April and May. I have had 19 years' experience of this district, and labour cannot be had in sufficient numbers during these months, and the few that are sometimes induced to stay on, die or are otherwise so saturated with malaria and fever that they are useless for any work whatever. I am perfectly willing to pay enhanced rates to labour that I can get in April to do certain important work which at that time of year can be done well and for half the cost against June, July and August, heavy wet weather. I have been trying to do this for the past 12 years and failed, with the exception of one year, when I did get up a gang of coolies in April, and after two weeks' work I lost seven from choleraic diarrhœa and the rest "cleared." With regard to Mr. Knight's remarks--quoted by you--that it has become a custom in Wynaad to leave the estates during the hot months, all I have to say is that it is a very good thing it has become a custom, which has probably saved several European lives and which accounts for the non-mortality owing directly to malaria among Europeans. I shall be certainly very pleased to see Ceylon men and Ceylon capital to the fore in Wynaad; but I will not say a district is healthy when it is not, merely to induce men to invest.

TEA IN AMERICA

NEW YORK, Feb. 6.—We still have a dragging market, particularly for Pingsueys and Country Greens, which are selling at phenomenally low prices. There is quite a large offering at this week's auction. English Breakfasts are dull and in buyers' favor. There is a fair demand for the better grades of Formosa which are not in ample supply, and, therefore, these grades rule strong, but other grades are weak. Japans are dull and easy for all sorts. It is the same disappointing, discouraging market that we have had for a month.

Today at noon the Montgomery Auction and Commission Company will sell 8,658 packages, viz.:—2781 half-chests Moyune including some very desirable chops; 4,342 boxes Pingsuey; 101 half-chest Japan and Nibs; 82 half-chests Japan basket-fired; 75 half-chest Japan dust; 631 half-chest Congou; 51 boxes Capers and orange pekoe; 66 packages India, Java and Ceylon; 486 half-chest Foochow, new season's 140 half-chests and boxes Formosa.—*American Grocer*, Feb. 5.

DRUG REPORT.

(From the *Chemist and Druggist.*)

February 15th.

ESSENTIAL OIL.—Citronella oil has been in good demand ately especially for shipment to America, and fair sales have been made. On the spot the quotation is 2s to 2s 2d per lb, and for arrival the following prices have been lpaid :—January-March steamer shipment 1s 10d; June shipment, 1s 9d; and August, 1s 8½d per lb., c.i.f.

February 15th.

THE AMSTERDAM CINCHONA-MARKET.—Our correspondent writes that the Java cinchona-bark auction which will be held in Amsterdam on February 20 will be extremely large, the total declarations amounting to 7,715 bales and 825 cases, together containing 725,219 kilos of bark. The average quinine contents of the bark is also exceedingly high, viz., 5·14 per cent, the total weight of Sulphate of quinine is the bark being 36,559 kilos. of which 36,005k. is contained in the manufacturing bark; the total weight of the manufacturing bark being 702,002, and that of the pharmaceutical bark 23,217 kilos.—*Chemist and Druggist.*

AUSTRALIAN COCONUT OIL.

The manufacture of coconut oil is to be one of the new Australian staple industries. The first sod was turned recently at Balmain by Mrs. Lever, the wife of Mr. W. H. Lever, of Messrs. Lever Bros., of the first coconut oil mill in Australia. The establishment is to be of a very complete and extensive character, capable of turning out several thousand tons of oil and oilcake per annum. Mr. Lever has selected New South Wales for his operations because Sydney is the principal port for the South Seas, whence the oil mainly comes in the form of coconuts.—*European Mail*, Feb. 19.

AGRICULTURAL EDUCATION AND EXPERIMENT.

The following are the recommendations of the Committee appointed by Government under G.O., No. 699, Revenue, dated 23rd October, 1895, on the question of how best to adopt the system of education in Primary Schools to the requirements of the agricultural classes. (The Committee was composed of Sir Edward Buck, K.C.S.I., Secretary to the Government of India, Revenue and Agricultural Department, the Hon'ble Dr. D. Duncan, M.A., Director of Public Instruction Mr. H. M. Winterbotham, Acting Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, Mr. F. A. Nicholson, I.C.S., Collector of Anantapur, Mr. C. Benson, M.R.A.C., Deputy Director of Land Records and Agriculture, and Mr W. Keess, M.A., M.R.A.C., Acting Principal of the College of Agriculture) :—(1) That Agriculture should not appear as a separate subject in the curriculum of rural Primary Schools but that the effort should be to impart an elementary knowledge of it in the group, "Object Lessons and Elementary Science," which group should be made a compulsory subject; (2) that Agriculture should be recognised as a separate optional subject for boys after they have passed the Fourth Standard, and that, until properly qualified teachers become available, the study of a text-book on Agriculture in Lower Secondary Schools will be better than nothing; (3) that the necessary step is to provide for the training of the teachers of Lower Secondary and Primary Schools' rural schools, and that to this end, every training institution, where such teachers are trained, should (*a*) have on the staff a master qualified to teach Agriculture, and (*b*) have attached to it a school garden; (4) that to secure an adequate supply of trained teachers for the rural, Primary and Lower Secondary Schools an agricultural class should be developed in selected educational institutions, where the general education will be carried on up to the Upper Secondary Examination, and special education in Agriculture up to the Intermediate Standard. Such classes will need a small demonstrational farm for teaching purposes, and a portion of a Government experimental farm may be utilised for the purpose, if there be one in the vicinity; (5) that it is not otherwise expedient to combine a Farm School for the above purpose with an experimental farm, as proposed in the scheme of the Madras Government, and (6) that the early establishment of experimental farms, as separate organisations and designed for carrying on agricultural investigation, is advisable.—*M. Times*, March 2.

SMOKERS SHOULD USE

CALVERT'S DENTO-PHENOLENE,

A FRAGRANT LIQUID DENTIFRICE AND MOUTH-WASH.

Editor of *Health* says: "The most effective preparation for ridding the mouth of the aroma of tobacco, and leaving a pleasant taste."

Sold in 1*s*. 6*d*., 2*s*. 6*d*., and 1 lb. 7*s*. 6*d*. bottles, by Chemists, &c.

F. C. CALVERT & CO., MANCHESTER.

COLOMBO PRICE CURRENT.

(Furnished by the Chamber of Commerce).

Colombo, March 9, 1896.

EXCHANGE OF LONDON: CLOSING RATES, *Bank Selling Rates*:—On demand 1/2 21-32 to 11-16; 4 months' sight 1/2 11-16 to 23-32; 6 months' sight 1/2 23-32 to ¾. *Bank Buying Rates*:—Credits 3 months' sight 1/2⅝; 6 months sight 1/2 29-32; Docts. 3 months' sight 1/2 29-32; 6 months' sight 1/2 15-16.

COFFEE.—Plantation Estate Parchment on the spot per bushel, R41 to 16·00. Estate Crops in Parchment, Jan. delivery, no quot. Plantation Estate Coffee, f.o.b. on the spot per cwt, R75·00 to 82. Liberian parchment on the spot per bushel, R12·00 Native Coffee f.o.b. per cwt. R60 to 62·50.—Nominal.

TEA.—Average Prices ruling during the week: Broken Pekoe, per lb 51c. Pekoe per lb 34c. Pekoe Souchong, per lb 33c Broken mixed and Dust, per lb 29c.—Averages of Wednesday's sale.

CINCHONA BARK.—Twigs and branch per lb 1½c. to c3.—1 to 4 %.

CARDAMOMS.—per lb R1·00 to 2·15.—Scarce.

COCONUT OIL.—Mill oil per cwt. R15 to 15·25. Dealer's oil per cwt. R14·75. Coconut oil in ordinary packages f.o.b. per ton R330 to 335.—Nominal.

COPRA.—Per candy of 560 lb R42 to R18·00.

COCONUT CAKE: (Poonac) f.o.b. per ton, R40 to 50.—Nominal.

Cocoa f.o.b. R30 to 40

COIR YARN.—Nos. 1 to 8 { Kogalla per cwt. R9 to 18. Col. side ,, R7 to 14.

CINNAMON.—Nos. 1 & 2 only f.o.b. 67c. Ordinary Assortment, per lb 64c.

PLUMBAGO: Firm.—Large Lumps per ton, R150 to 330. Ordinary Lumps per ton, R130 to 290. Chips per ton, R80 to 140. Dust per ton, R30 to 90.

EBONY: per ton.—Govt. sales on 16th instant.

RICE.—Soolye per bag, R7·30 to R8·00.—Very scarce.
Pegu and Calcutta Calunda per bag R7·85 to R8·15.
Coast Calunda per bushel, R3·15 to R3·35.
Muttusamba per bushel, R3·20 to R3·65.
Kadappa and Kuruwe per bushel, R2·85 to 3·00.
Rangoon Raw 3 bushel, bag, R9·00.

FREIGHTS.

Cargo.	Per ton London per str. s. d.	N. York per str. s. d.	Trieste per str. s. d.	Mar'lles per str. s. d.	Hamb', Bremen &c. s. d.
Tea	20/	..	25/	25/	20/
Coconut Oil	20/	..	25/	25/	20/
Plumbago	17/6	..	25/	25/	20/
Coconuts in bags	17/6	..	25/	25/	20/
Other Cargo	17/6	..	25/	25/	20/
Broken Stowage	10/	..	25/	25/	20/
SAILERS.					
Coconut Oil	..	32/6	..	..	..
Plumbago	..	32/6	..	..	..

New York rates per steamer with transhipment 12/6 @ 15/ above London rates

LOCAL MARKET.

By Mr. A. M. Chittambalam, 7, Baillie St., Fort.

Colombo, March. 13, 1896.

Garden Parchment :—	R14·00 to 14·25	per bushel
Chetty do :—	13·50 to 14·00	do
Native Coffee :—	55·00 to 57·00	per cwt
do f.o.b. :—	63·00 to 63·00	do
Liberian Parchment,	12·00	per bushel (nominal)
do Coffee,	60·00 to 62·00	per cwt
CARDAMOMS.—	0·70 to 1·75	per lb (nominal)
COCOA.—(nominal)	30·00 to 37·00	per cwt do
RICE.—Market is quiet :—		
Kazla	R6·50 to 6·75	per bag
Soolye	7·00 to 7·50	do
Callunda	7·75 to 8·00	
Coast Callunda	3·00 to 3·06	per bushel
Kuruve (New)	2·75 to 2·87	do
Muttusamba	3·25 to 3·50	do

CINNAMON.—Quoted Nos. 1 to 4, at 63c and Nos. 1 and 2 at 66 cents per lb (nominal)
CHIPS.—R75·00 per candy (nominal)

COCONUTS.—Ordinary	R35·00 to 38·00	per 1,000 (nominal)
do Selected	40·00 to 43·00	do do
COCONUT OIL.—	14·87 to 15·00	per cwt do
COPRA.—Market steady :—		
Kalpitiya	R49·00 to 50·00	per candy
Marawila	47·00 to 48·00	do
Cart Copra	42·00 to 45·00	do
POONAC.—Gingelly	90·00 to 95·00	per ton
Chekku	100·00 to 105·00	do
Mill (retail)	70·00 to 80·00	do
EBONY.—quotations at	R100 to R185	(nominal)
SATINWOOD.—cubic feet	1·50 to 2·12	do
HALMILLA.— do	1·25 to 1·50	do
KITUL FIBRE.—Quoted at R30·00		per cwt (nominal)
PALMYRA FIBRE.—Quoted nominally :—		
Jaffna Black.—Cleaned (Scarce)		
do Mixed	R17·00 to 18·00	per cwt.
Indian do	R7·00 to 9·00	do
Do Cleaned	10·00 to 14·00	
SAPAN WOOD.—Quoted	55·00 to 60·00	per ton
KEROSINE OIL—American	7·30 to 7·35	per case
do Russian	3·45 to 3·50	per tin
KAPOK.—Cleaned f. o.b :—	29·00 to 30·00	(nominal)
do Uncleaned	6·00 to 6·50	(Scarce)
Croton Seed	13·00 to 17 00	do
Nux. Vnomica	2·50 to 3·00	per cwt

CEYLON EXPORTS AND DISTRIBUTION

1895-1896.

COUNTRIES.	Coffee cwt. Plan-tation	Coffee cwt. N'tive	Coffee cwt. Total.	Cinchona. 1896 B'nch & Trunk lb	Tea 1896 lb.	Tea 1895 lb.	Cocoa cwt.	C'moms lb.	Cinnamon. Bales lb.	Cinnamon. Chips lb.	Coconut Oil 1896 cwt.	Coconut Oil 1895 cwt.	P'bgo. 1896 cwt.
To United Kingdom ..	2861	5	2866	69845	15084634	15104989	8327	14444	106720	44365	23700	35220	17112
,, Austria	279	..	279	..	1415	380	..	..	1200	..	3855	3735	..
,, Belgium	..	..	..	..	3440	956	..	..	11200	26488	904	204	3167
,, France	455	..	455	..	11483	2389	..	..	23100	3500	..	.	408
,, Germany	553	5	558	..	24120	27470	193	16904	34300	76902	2549	2614	6011
,, Holland	..	..	..	..	..	500	..	..	..	..	..	..	..
,, Italy	6	..	6	832	1006	2560	6	..	12600	11200	103	..	264
,, Russia	59	..	59	..	46878	2404	..	..	..	..	..	..	..
,, Spain	..	..	..	..	6700	9500	..	..	5000	2520	..	..	..
,, Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..
,, Turkey	..	..	..	..	3062	800	..	..	..	..	.	..	..
,, India	122	..	122	1379	193588	98065	..	27805	..	..	9480	253	..
,, Australia	719	111	830	..	1871927	1388212	25	..	1000	448	..	285	..
,, America	81	..	81	..	57126	59341	..	..	20000	..	1002	16934	18543
,, Africa	..	..	..	..	11710	5355	..	..	..	..	..	..	..
,, China	10	..	10	..	34168	43798	..	..	..	..	..	..	..
,, Singapore	..	..	..	..	2088	3324	95	..	..	..	1404	2489	..
,, Mauritius	..	..	..	..	..	10166	..	..	..	..	..	..	..
,, Malta	..	..	..	..	19350	7390	..	..	..	..	..	..	..
Total exports from 1st Jan. to 9th March. 1896	5145	121	5266	72056	17372695		8646	59153	215120	165423	42997		45505
do 1895	16872	281	17153	149194	16767599		10195	108890	325970	115978	61734		34882
do 1894	5537	85	5622	543028	13903491		4722	72162	270537	66046	67010		54467
do 1893	15116	134	15450	1127627	14870347		9824	101259	205389	129446	47751		111228

MARKET RATES FOR OLD AND NEW PRODUCTS.

(From S. Figgis & Co.'s Fortnightly Price Current, London, 12th February, 1896.)

EAST INDIA. Bombay, Ceylon, Madras Coast and Zanzibar.	QUALITY.	QUOTATIONS.
ALOES, Socotrine	Good and fine dry liver...	£3 10s a £6
Zanzibar & Hepatic	Common and good ...	30s a 80s
BARK, CINCHONA Crown	Ledgeriana chips ...	2d a 3½d
	Original stem	1¼d a 3d
	Renewed	2d a 4½d
	Chips	1¼d a 2d
BEES' WAX, White ...	Sli. sof. to gd. hard brig.	£7 10s a £8
Yellow ...	Dark to fair	£6 a £7
Mauritius & Madagascar...	Fair to fine	£6 10s a £7
CAMPHOR, China ..	Fair average quality	nominal
Japan ..		197s 6d
CARDAMOMS—		
Allepee	Fair to fine clipped ..	1s a 2s 6d
Mangalore	Bold, bright, fair to fine .	1s 10d a 2s 8d
Malabar	Clipped bold bright fine	1s 8d a 2s 3d
Ceylon	Middling, stalky & lean	1s 3d a 1s 7d
Tellicherry	Good to fine	1s 6d a 1s 8d
	Brownish	9d a 1s 4d
Mysore	Fair to fine plump clipped.	1s 9d a 3s 6d
	,, ,, small ..	1s 3d a 1s 6d
Long Ceylon ...	Shelly to good	1s 6d a 2s 11d
	Seeds ...	2s 6d
CASTOR OIL, 1sts	White	3d a 3½d
2nds	Fair and good pale ...	2¾d a 2½d
CHILLIES, Zanzibar ...	Fair to fine bright ..	28s a 35s
	Ord'y. and middling ...	26s a 28s
CINNAMON, 1sts	Ord'y. to fine quill ..	9½d a 1s 3d
2nds	,, ,, ,, ,, ..	9d a 1s 1d
3rds	,, ,, ,, ,, ...	8½d a 1s
4ths and 5ths	,, ,, ,, ,, ..	7½d a 9½d
Chips	fair to Good ..	3d a 3⅔d
CLOVES, Zanzibar and Pemba.	Fair to fine bright ...	1 15-16d a 2½d
	Common dull and mixed	1¾d a 2d
,, STEMS	Common to good ...	1d
COCULUS INDICUS ...	Fair sifted...	8s a 12s
COFFEE	Bold to fine bold colory	105s a 116s
	Midding to fine mid .	100s a 104s
	Low mid and low grown	95s a 99s
COLOMBO ROOT... ...	Good to fine bright sound	10s a 15s
	Ordinary & middling ...	7s a 8s
CROTON SEEDS, sifted...	Fine fresh ...	50s
CUTCH	Fair to fine dry ...	20s a 32s
DRAGONS BLOOD, Zan.	Ordinary to good drop ...	25s a 50s
GALLS, Bussorah & Turkey	Fair to fine dark blue ...	50s a 55s
	Good white and green ..	40s a 47s 6d
GINGER, Calicut Cut A	Good to fine bold .	68s a 70s
B & C	Small and medium .	52s 6d a 57s 6d
Cochin Rough...	Common to fine bold ..	35s a 37s
,, ...	Small and D's ...	30s a 33s
Bengal Rough	Fair to good ...	17s
GUM AMMONIACUM ...	Blocky to fine clean ...	20s a 50s
ANIMI, washed ..	Picked fine pale in sorts	£9 a £11
	Part yellow & mixed do.	£8 10s a £8 15s
	Bean & Pea size ditto .	£1 a £7 10s
	Amber and red bold	£5 a £7
scraped...	Medium & bold sorts ..	£4 a £7
ARABIC E.I. & Aden...	Good to fine pale frosted sifted	10s a 45s
	Sorts, dull red to fair ...	32s 6d a 35s
Ghatti ..	Good to fine pale selected	40s a 50s
	Sorts middling to good	32s 6d a 37s 6d
Amrad cha	Good and fine pale ...	32s 6d a 40s
	Reddish to pale brown ...	25s a 30s
Madras ...	Dark to fine pale ...	25s a 35s
ASSAFŒTIDA	Fair to fine pinky block and drop	45s a 80s
	Ordinary stony to middling	15s a 40s
KINO	Fair to fine bright ..	£25 a £30
MYRRH, picked	Fair to fine pale ...	£4 a £5
Aden sorts	Middling to good ..	50s a 60s
OLIBANUM, drop...	Fair to fine white ...	38s a 55s
,,	Reddish to middling ..	20s a 25s
pickings...	Middling to good pale ...	8s a 14s
siftings	Slightly foul to fine .	9s a 13s
INDIARUBBER	Red hard clean ball ...	2s 1d a 2s 5d
East African Ports, Zanzibar and Mozambique Coast	White softish ditto ...	1s 8d a 2s
	Unripe root	10d a 1s 5d
	Liver and Lamu ball ...	1s 8d a 2s 1d
	Sausage, ordinary to fine	1s 3d a 2s
	,, without sticks	2s 1d a 2s 4d
Assam	Good to fine ...	1s 7d a 2s 2d
	Common foul & middling	9d a 1s 5d
Rangoon	Fair to good clean ..	1s 6d a 2s 2d
Madagascar, Tamatave, Majunga and Nossibe	Good to fine pinky & white	2s 1d a 2s 4d
	Fair to good black ...	1s 6d a 1s 10d
ISINGLASS or FISH MAWS Tongue.	good to fine pale ...	2s a 2s 9d
	dark to fair ...	10d a 1s 8d
Bladder Pipe	Clean thin to fine bold...	1s 8d a 2s 9d
Purse ..	Dark mixed to fine pale ..	5d a 1s 3d

EAST INDIA. Bombay, Ceylon, Madras Coast and Zanzibar.	QUALITY.	QUOTATIONS.
Kurrichee Leaf ...	Good and fine pale	
	Red part thin ..	2s 3d a 3s
INDIGO Bengal	Middling to fine violet...	1s 6d a 2s 1d
	Ordinary to middling ...	4s 8d a 5s 6d
Kurpah	Fair to good reddish violet	3s 2d a 4s 6d
	Ordinary and middling	2s 8d a 3s 6d
Madras (Dry Leaf)	Middling to good ...	1s 9d a 2s 6d
	Low to ordinary ..	1s 7d a 2s 10d
		7d a 1s 5d
IVORY—Elephants' Teeth		
60 lb & upwards ...	Soft sound	
over 30 & under 60 lb	,, ,,	£56 a £62 10s
60 a 100 lb. ...	Hard ,, ,,	£51 a £58 10s
Scrivelloes	Soft ,, close & wide	£37 a £41
Billiard Ball Pieces 2⅔ a 3¼ in	Sound soft	£23 a £26
Bagatelle Points ...	Sli def. to fine sound soft	£81 a £92
Cut Points for Balls ...	Shaky to fine solid sl. sft	£50 a £56 10s
Mixed Points & Tips...	Defective, part hard ...	£60 a £72 10s
Cut Hollows	Thin to thick to sd. sft	£33 a £46
Sea Horse Teeth — ...		£24 a £41
⅔ a 1¼ lb.	Straight corked part close	
MYRABOLANES, Bombay	Bhimlies I, good & fine pale	9d a 2s
	,, II, fair pickings	7s 6d a 7s 9d
	Jubblepore I, good & fine pale	3s 6d a 4s
	,, II, fair rejections	5s 3d a 7s
	Vingorlas, good and fine	3s 6d a 4s 6d
		1s 6d a 5s 6d
Madras, Upper Godavery	Good to fine picked ...	
,, ,, ..	Common to middling ...	5s a 5s 6d
Coast	Fair	3s 3d a 4s
Pickings ...	Burnt and defective ...	4s 6d a 4s 9d
MACE, Bombay ...	Dark to good bold pale ..	3s 3d a 3s 9d
	W'd com. dark to fine bold	1s 6d a 2s
NUTMEGS, ,, ...	65's a 81's	2½d a 4½d
	90's a 125's	1s 10d a 3s
NUX VOMICA	Fair to good bold fresh	1s a 1s 8d
OIL, CINNAMON ..	Ordinary to fair	3s a 8s
CITRONELLE ...	Bright & good flavour..	4d a 1s 3d
LEMONGRASS ...		1s 10d a 2s
	,, ,, ,, ...	2¼d
ORCHELLA WEED Ceylon ..	Mid. to fine, not woolly	11s a 15s
Zanzibar	Picked clean flat leaf ...	12s a 18s
Mozambique	,, wiry	22s a 32s
PEPPER—		
Malabar, Black sifted ...	Fair to bold heavy	
Alleppee & Cochin ..	,, good ,, ...	2⅛d a 2⅜d
Tellicherry, black ..	,,	
PLUMBAGO, Lump ...	Fair to fine bright bold	
	Middling to good small	15s a 17s 6d
Chips ...	Dull to fine bright	3s 6d a 13s
Dust ...	Ordinary to fine bright...	1s 6d a 8s 9d
RED WOOD	Fair and fine bold ..	2s a 6s
SAFFLOWER, Bengal	Good to fine pinky nominal	£4 a £4 10s
	Ordinary to fair ...	70s a 90s
	Inferior and pickings ...	60s a 70s
SANDAL WOOD, Logs	Fair to good flavour ...	30s a 50s
,, ,, Chips .	Inferior to fine	£30 a £50
SEEDLAC	Ordinary to fine bright	£4 a £8
SENNA, Tinnevelly ...	Good to fine bold green	50s a 100s
	Fair middling medium	6d a 8d
	Common dark and small	3d a 5½d
Bombay ..	Ordinary to good ...	¼d a 2¼d
SHELLS, M.-o'-P. ..	EGYPTIAN—bold clean	1d a 2d
	medium thin and stout	70s a 77s 6d
	chicken, part oysters	65s a 80s
large	BOMBAY—poor to fine thin	62s 6d a 77s 6d
medium part stout	clean part good color	75s a 82s 6d
chicken part stout		70s a 85s
oyster & broken pcs	,, ,, ,,	77s 6d a 87s 6d
	,, ,, ,,	70s a 85s
Mussel	medium and bold sorts	40s a 47s 6d
	small and medium sorts	17s a 30s
Lingah Ceylon .	Thin and good stout sorts	9s a 30s
TAMARINDS	Mid. to fine black not stony	9s a 11s
	Stony and inferior ..	4s a 6s
TORTOISE-SHELL ...	Sorts good mottle, heavy	24s a 30s
Zanzibar and Bombay	Pickings thin to heavy ..	18s a 23s
TURMERIC, Bengal ...	Leanish to fine plump finger ...	7s a 8s
Madras ...	Fin. fair to fine bold bright	8s a 9s 6d
,, ..	Mixed middling	7s a 8s
,, ...	Bulbs	6s 6d a 7s 6d
Cochin ...	Finger	7s a 7s 6d
	Bulbs	5s 6d a 7s 6d
VANILLOES,		
Bourbon, 1sts ...	Fine, cryst'ed 5 to 9 in.	22s a 33s
Mauritius, 2nds...	Foxy & reddish 5 to 8 in.	16s a 21s
Seychelle, 3rds ..	Lean & dry to mid. under 6 in. ...	12s a 15s
Madagascar, 4ths..	Low, foxy, inferior and pickings	6s a 10s

THE

AGRICULTURAL MAGAZINE,

COLOMBO.

Added as a Supplement Monthly to the "TROPICAL AGRICULTURIST."

The following pages include the Contents of the *Agricultural Magazine* for March :—

Vol. VII.] MARCH, 1896. [No. 9.

SEASON NOTES.

JANUARY 1896.

WESTERN PROVINCE.—*Paddy.*—Maha harvest has commenced and preparation is being made for yala. Fruit and vegetable reported scarce in all districts except Colombo, where the vegetable supply has been fairly good. Harvest prospects good.

CENTRAL PROVINCE.—A good Maha-crop, dry grain good. Fruit and vegetable plentiful, rainfall generally sufficient. *Stock.*—Foot and mouth disease appeared in Uda Hewaheta and Walapane.

NORTHERN PROVINCE.—*Paddy crop* prospects fairly good in all districts. Dry grains satisfactory everywhere except in Jaffna. Tobacco, planting completed, want of vigour in growth reported from some districts. *Stock.*—Cattle plague (murrain) and foot and mouth disease reported from Vavuniya district.

SOUTHERN PROVINCE.—*Paddy.*—Maha crop being harvested except in some parts of Hambantota district, where it is in different stages of growth. Vegetable and fruit scarce. Dry grains fairly good.

EASTERN PROVINCE.—Crop in good condition, except that on lowlands, damaged by rain. Fine grain good. *Stock.*—Foot and mouth disease on the decline.

NORTH-WESTERN PROVINCE.—Harvesting commenced. Maha crop being grown, prospects good. In Puttlam district insect pests reported.

NORTH-CENTRAL PROVINCE.—Crop in various stages, some being reaped, prospects good. Tanks full. *Stock.*—Cattle plague prevailing and no improvement.

UVA.—Yala crop harvesting, sowing for Maha going on, prospects middling, Chena crops good prospects. Fruit and vegetable plentiful except in Udukinda, where vegetables are reported to be scarce.

SABARAGAMUWA PROVINCE.—Maha crop being harvested; yield generally good. Dry grain outturn satisfactory. *Stock.*—A few buffaloes in Kegalle district succumbed to cattle plague; disease did not spread further.

AGRICULTURAL SHOWS.

Agricultural societies and agricultural shows have no proud record in this Island, for while societies have either sunk into oblivion through the apathy of its members or been transformed into political or other associations, shows, as held in Ceylon have never maintained their true character. Our so-called agricultural shows have generally been of the nature of expositions where the exhibits have been of a very miscellaneous description, and their main object would seem to have been to serve as a medium for recreation and amusement. We are strong believers in the utility of shows as agents in the improvement of agri-

culture, but to fulfil this end, they should be properly organized and managed. The holding of such shows only in capital towns, at very long intervals, and on an elaborate scale with a considerable and costly display of decorative taste, results in little benefit to the agricultural masses in a country such as ours. To be of value these shows should in the true sense of the word be agricultural, they should be held once or twice a year and at differeut country centres, while, last but not least, they should be under the control of a competent Committee of Management.

Our attention has just been directed to an "Order" dated Nov. 27th, 1895, of the Madras Government, containing a reference to the subject of agricultural shows, which we would respectfully submit for the consideration of our local authorities. It runs as follows:—"The attention of Government has in this connection been drawn to the general subject of agricultural shows and exhibitions. In paragraph 21 of G.O., No. 515, dated 4th July 1890, it was decided to confine expenditure upon these objects to the case of cattle and pony shows, but the Government is disposed to doubt whether this dicision should be adhered to. According to the system in vogue prior to 1890, only two agricultural exhibitions were held every year for the whole Presidency, and the benefits derived therefrom were confined to comparatively small areas. As it appears to Government, what is required is rather the institution of exhibitions on a minor scale to be held in each district at much more frequent intervals, say every two or three years. The management of such exhibitions should be under the general supervision of the Director of Agriculture, the details being as far as possible left in the hands of a local committee, and the expenses being defrayed by means of local subscriptions supplemented by a small grant-in-aid from Government of, say, R500 per district. The offer at such exhibitions of prizes for the best agricultural stock, produce and implements, would excite considerable local interest, and their institution might ultimately be productive of real good. Striking results could hardly be expected in the first few years.

"The question raised is one of considerable importance, and the Government desires that it should be discussed at the meetings of the Committee which has been appointed in G.O., No. 699, dated 23rd October, 1895, to confer with Sir Edward Buck on the general subject of agricultural education and experiment.

(Signed) E. Gibson,
Secretary to Government."

To show more clearly the practical value of agricultural shows in the East, we give the following extract from a report of the Director of Agriculture in the North-Western Provinces of India:—

During the year under report agricultural shows were held in the districts of Bara Banki, Etáwa Aligarh, Bulandshahr, Muzaffarnagar, Muttra, Meerut, Khairabad, Bánda, Basti and Benazír (Rámpur State). The fairs at Etáwah, Aligrah, Bulandshahr, Meerut and Benazír were visited by the Assistant Director personally and the rest by other officials of the Department, mostly apprentices from the Cawnpore Farm, in order to arrange for the exhibition of agricultural implements. The Assistant Director delivered lectures on agricultural subjects in most of the shows attended by him, and assisted in awarding the prizes for cattle, agricultural produce and implements. An interesting and very popular feature of all these shows is a competition between the implements in ordinary use, and the improved but more expensive implements supplied by the Department. The Watts, Kaisar and Baldeo ploughs are shown in competition with native ploughs; the chain pump is worked against the ordinary swing basket, the chaff-cutter against labourers using the chopper and so on. Samples of produce of the Cawnpore and Cherat Farms, chiefly Muzaffarnagar wheat, gur made from sorghum, and foreign varieties of cotton, were also exhibited in them; and prizes were given for the best samples of produce exhibited. A dairy in full working order was arranged under the management of Mr. Keventer at Rámpur, Aligarh and Meerut. The largest sale of ploughs and pumps took place at the Bulandshahr and Meerut shows.

"As stated in previous reports, the agricultural exhibitions are becoming more and more popular every year, and in these the Department finds the best opportunity for bringing improved implements and methods into public notice."

OCCASIONAL NOTES.

This being our first issue since the arrival of the new Governor of the Colony, we take the opportunity of respectfully welcoming His Excellency Sir Joseph West Ridgeway to the Island. Our new ruler has already expressed his sympathy with the cause of agricultural education and his interest in the introduction of new products into the Island, so that we may expect during his rule that every facility will be given for the improvement of the agriculture of the Colony in the direction that improvement is possible.

Tomato cultivation has been carried on at the School of Agriculture with marked success during the first two months of the year, and the credit is due to the manager of the Government Dairy (Mr. J. Rodrigo), late practical instructor at the School. In this connection we would draw attention to some useful Notes on the Tomato which we have taken over from the *Australasian.*

A small crop of grapes was taken from the vineyard at the School of Agriculture on the 23rd February and succeeding days. The crop of about 25 bunches of various sizes,—but none very large,—were the produce from plants only 18 months old, and which, moreover, were brought over from Australia about 6 months ago. The long drought and excessive heat that have been prevailing have tended to mature the grapes rather too fast, and so interfere with their proper development and flavour, but still the outlook is not unpromising for the experiment, which is, for one thing, giving ample opportunity for the study of viticulture from a local standpoint. There is of course much to be done in the way of modifying the treatment of the vines to suit the conditions under which they are at present growing.

We would draw attention to a most interesting contribution to our knowedge (hitherto so limited) of the subject of plant physiology, by Professor

J. Reynolds Green, which appears in the journal of the Royal Agricultural Society of England The first instalment of Prof. Green's paper is given in the present issue, and all students of plant life will, we are sure, be interested in the article which will appear in parts in the pages of the Magazine.

The giving away of prizes and certificates to successful students at the School of Agriculture was practically a private function last year,—as it generally is every other year. The ceremony was performed by the Director of Public Instruction, who took the opportunity of addressing the students at some length on matters pertaining to their course of instruction at the school. Prizes were won in the senior class by W. O. Rowlands and M.D. Aryachandra, and in the junior class by H. P. Ratnayaka, B. Lucas Mendis, and D. P. Goonewardana. Three of the senior students who have completed their course were awarded certificates of merit by the department.

RAINFALL TAKEN AT THE SCHOOL OF AGRICULTURE DURING THE MONTH OF FEBRUARY, 1896.

1	Saturday ..	Nil	18	Tuesday ..	Nil
2	Sunday ..	Nil	19	Wednesday ..	Nil
3	Monday ..	Nil	20	Thursday ..	Nil
4	Tuesday ..	Nil	21	Friday ..	Nil
5	Wednesday ..	Nil	22	Saturday ..	Nil
6	Thursday ..	Nil	23	Sunday ..	Nil
7	Friday ..	Nil	24	Monday ..	Nil
8	Saturday ..	Nil	25	Tuesday ..	Nil
9	Sunday ..	Nil	26	Wednesday ..	Nil
10	Monday ..	Nil	27	Thursday ..	Nil
11	Tuesday ..	Nil	28	Friday ..	·03
12	Wednesday ..	Nil	29	Saturday ..	Nil
13	Tuesday ..	Nil	1	Sunday ..	Nil
14	Friday ..	Nil			
15	Saturday ..	·35		Total ..	·38
16	Sunday ..	Nil			
17	Monday ..	Nil		Mean ..	·013

Greatest amount of rainfall in any 24 hours on the 15th instant, ·35 inches.

Recorded by J. D. S. JAYAWIKRAMA.

MEDICINAL PLANTS.

Among other important experiments which should find a place in the scheme of a properly-organized Agricultural Department in Ceylon, should be the trial of medicinal plants, used in European medicine, that might be expected to thrive under local conditions. We have often thought over the desirability of initiating such an experiment, convinced as we are that useful results will come out of it. We lately heard that among the trials to be made in connection with the proposed Experimental Farm with which Mr. Mahawallatenne Ratemahatmaya has identified himself, is the growth of the more useful indigenous and Indian drugs used, we presume, in native medicine. Our attention has also been drawn to the importance of a series of experiments in growing English drug plants by a local chemist. The produce, if the experiment proved successful, would of course in the first instance be available for the needs (by no means limited) of the Medical Department, but a demand from local druggists may also be expected. It is not every plant that could be expected to thrive under local conditions, but if the proposed experiment be not limitedonly to the lowcountry, but also extended to higher elevations, a fair number of cultivable medicinal plants will be found. In India, we are aware, a start has been made in the growing of drug-plants, and in the report on the Saharanpur and Mussoorie Gardens we note that Hyocyamus and Teraxicma are grown and also extracts made from them. Hyocyamus extract is sold to the Medical Department at R1·4 annas per lb., the dried folia at 4 annas per lb.; while Teraxicum extract is sold for R1 per lb. and the dried roots at 4 annas. We believe some saving has been effected in the Civil Medical Stores by the local preparation of certain tinctures, liniments, ointments and standard mixtures. We have no doubt that if the support of the Medical Department be given to local drug production, in the same way that the Department supports the Government Dairy, the proposed experiment will start under happy auspices and with many of the elements of success in it. But then provision should be made for the trials being carried out systematically and thoroughly, and to this end a scheme and estimate for the experiment should be drawn up and sanctioned. We hope in a future issue, to refer to same of the plants which might be locally grown for medicinal purposes.

DAIRIES IN INDIA.

The following descriptions of Indian Dairies (for which we are indebted to the *Indian Agriculturist*) give a fair idea of the progress of the dairy industry on the mainland, and are interesting for purposes of comparison with the working of our local establishment:—At Allahabad Government first made an experiment in dairy-farming in 1891, when a herd of 11 buffaloes for butter and 22 cows was purchased, and the supply of dairy produce to the military hospital most successfully taken up. The herd has gradually been increased by breeding and purchase, till at the present moment it consists of 125 buffaloes, 70 cows, and 156 young stock. The average daily outurn of milk is 1,550 pounds (or 775 seers), of which about 500 pounds is consumed by the troops as whole milk, and most of the remainder turned into cream, yielding 80 pounds of butter daily. The separated milk is sold at half the price of whole milk, and the unsold balance fed to the pigs. I do not here propose to encroach on your valuable space by entering into the subject of the breeding and keeping of well-bred pigs as an adjunct to a dairy farm, which subject is of equal importance to the public health. Although the dairy produce has been sold to the troops at bazaar rates, the Allahabad Dairy is a paying concern, and since its establishment in 1891 up to date has resulted in a financial profit of over R20,000. I think these results show that the experiment is an unqualified success, and I venture to assert that no better system could be adopted for other stations throughout India, and that further delay in establishing dairies on the same footing is valuable time lost.

While dairy farming is to the front, the attention of our readers may be drawn to what was, perhaps, the first private institution of the kind in India. This is the Chowkooree Dairy Farm at Berenag, Kumaon, which was opened some twelve or fourteen years ago, with the object of supplying good milk and butter to the British regiment stationed in Kumaon. Since then the farm has steadily prospered, the conditions being all in favour of such an enterprise. Labour is cheap, and so is grain. To consume the butter milk, Berkshire pigs are kept, and the farm manure goes on to the plantations, and 25 acres of ground which are under oats, barley, potatoes, &c. The proprietor has cart roads all over the estate to cart the manure to the fields, which is done by English pattern carts on Marshall & Son's iron wheels, carrying 25 to 30 maunds a-piece and drawn by four buffaloes. An English dairy-maid looks after the cream and butter-making, and the proprietor is now arranging to get out a Salenius Butter-Maker, which is said to "pasteurise" the milk, separate the milk, and churn it into butter —all in one operation.

The following is another description of the same institution:—Some 40 miles from Almora and 50 miles from Ranikhet stands the Chowkooree Dairy Farm at an elevation of 7,000 ft. It possesses 2,000 or 3,0 0 acres of fee-simple undulating land covered over with as rich grass as grows anywhere in Kumaon and plentifully supplied with springs of cool, clear water. This magnificent area is grazed by the Chowkooree cattle. No village cattle are permitted to enter, and pensioned Gurkhas are employed as rangers to enforce this rule. Thus, while rinderpest and foot-and-mouth disease yearly ravage village herds in Kumaon, often appearing in the vicinity of Chowkooree, the farm has been singularly fortunate in keeping its cattle free from infectious diseases. The Chowkooree Dairy Farm has now about 300 head of cattle, mostly of a breed of its own, obtained by judicious crossing of hill and plains cattle. They stand remarkably well the extremes of climate, and are none the worse for 100" of rain or a 12" fall of snow. Timber, stones, and labour being cheap and plentiful, large airy cattle sheds are suitably located on the estate. The dairy is fitted up with the usual modern appliances, and being in charge of an English dairymaid, is kept scrupulously clean. All the milk is made into butter only, and finds a ready sale in Kumaon. Besides the dairy there is a poultry yard containing well-known imported breeds of English fowls, and also a small piggery of Berkshire breed. The manure helps to cultivate large crops of Cape oats, barley, and rye, all of which is consumed on the farm. Chowkooree is not the outcome of separators, but was in existence as a farm long before the public out here began to take an interest in dairy farming. I may add, in conclusion, that all those little trifles which are essential to success in most concerns are kept in view, and that the Chowkooree Dairy Farm is conducted with no little industry and economy, directed by intelligence.

The only station in which a Commissariat Dairy Farm was maintained in India during the past official year, says a Rangoon paper, was Bernardmyo, which worked at a profit of over R350 against a loss of some R2,000 in the previous year. This favourable result is attributable to a considerable reduction in the expenditure on account of the supply of food to cattle, which were sent to graze, and also in the cost of the establishment for its upkeep. The Government of India in December last, on the very strong recommendation of the local military authorities, sanctioned the continuance of the farm in supersession of their previous order, in which it was decided that the farm should be closed on account of its continued unprofitable working. The stock consisted of 25 cows and 42 calves on the 31st March last. During the year there was an addition to the stock by the birth of 29 calves and by the purchase of cows and cow-calves. The produce of the farm amounted to over 10,000 pints of milk, of which only 3,000 pints were issued to the hospitals at Bernardmyo and the rest sold as surplus, realizing some R1,300.

PADDY PESTS.

Calandra Oryzæ.—This small beetle attacks wheat, barley, Indian corn and rice. The weevil is a purely granary pest, and grain can therefore be preserved by isolation and other precautions against infection after it leaves the fields—hardy grains being more easily protected than the softer kinds. The wandering propensities of the weevil make isolation a difficult matter in the neighbourhood of infected localities. It would appear that the husk of rice is sufficient to protect it from the attack of the insect.

Chætocnema basilis.—This beetle is said to do much damage to the young rice in parts of Burmah &c., appearing when the plants are about 6 inches high, and after first attacking the leaves passing on to the stem and roots. Some of the following means which have been found effectual with other members of the *Halticidae* have been suggested as remedities against this beetle:—(1) Sprinkling the plants with any finely-divided matter such as lime, soot, road dust, ashes &c. (2) Syringing or sprinkling with whale-oil, soap-solution, or an extract of wormwood. (3) Taking great care to keep the land clean. (4) Deeper cultivation. (5) Collecting the insects in kerosine or cloths soaked in kerosine.

Injuries to rice are also caused by insects which are probably "Cut-worms" (*Agrostis suffusa*), and Mr. Coates of the Indian Museum thinks that it is not improbable that much of the damage reported as due to obscure lepidopterous larvæ may also be done by insects belonging to this group. These larvæ attack the young crop just as it shows above ground, and not only feed on the young leaves, but cut through the stems, dragging the tender plants into their underground burrows where they feed on them at night. The following method of destroying the larvæ has been found effectual by Dr. Riley in America:—"Bundles of cabbages, turnip or clover are sprinkled with Paris green water, and laid at intervals between the rows of the crop to be protected. Before the plants come up these poison the cut-worms, which are thus got rid of before the appearance of the crop which they would otherwise attack."

The rice-sapper (*Leptocorisa acuta*) is an insect which does considerable damage to rice. By the Sinhalese it is called goyan-messa. The insect is most destructive in the larval state, sucking out

the juices from the halm which withers and turns yellow. A common means of riddance is the smoking of fields by burning vegetable refuse to windward. As much as three-fourths of a crop is destroyed by this insect.

Hispa ænescens is another rice pest widely distributed through India. It is a beetle belonging to the family Chrysomelidæ, almost all the species of which feed on leaves, both in the larval and mature stage, by far the greater part of the damage being done by larvæ. Mr. Coates of the Indian Museum writes thus of this pest:—"From the reports that have been recsived, it seems that the pest appears often in large numbers during the rains, when the rice has just been planted out, and is still young and tender, the insect feeding on the parenchyma of the leaves and stalks, leaving the fibre exposed so as to give the plants a white and withered appearance. The effect of the pest would seem to be to stunt and weaken the plants and cause them to yield but a small crop." The crop is apparently in no case completely destroyed by the insect, but the outturn may be reduced by from twelve to fifty per cent. The two common remdies against this pest are (1) smoking out the insects by burning paddy-straw covered over with green leaves, and (2) letting out the water from the fields. The latter, where practicable, is recommended by Mr. Coates, as it appears that only paddy which is almost completely submerged is attacked.

(*To be continued*)

THE NUTRITIVE PROCESS IN PLANTS.

(PROFESSOR J. REYNOLDS GREEN, D.SC., F. R. S.)

There seem at first sight to be very great and almost characteristic differences between plants and animals in regard to their methods of nutrition. The food materials which the several organism avail themselves of are at the outset very differs ent, so simple in the one case, so complex in the other. The regularity with which the animal takes in nourishment at fairly constant intervals contrasts strongly with the long periods of absorption varied by long and irregular periods of intermittance which are characteristic of the plant. Yet when we come to study the details of the nourishment of the actual living substance of the plant, as distinguished from the absorption of the raw materials of which that nourishment is composed, the difference almost disappears. The study of the chemical process which go on in plants, or as it is technically called their metabolism, shows us that the apparent process of feeding, the absorption of very simple compounds from the air and from the soil, is not the feeding or administering of nourishment itself, but only a preliminary operation, enabling the living substance of the plant to construct its pabulum from these simple bodies, the pabulum really being as complex as that on which an animal is nourished, and consisting of almost the same substances, at any rate of bodies which correspond very closely to those of the animal diet. In other words both classes of organism feed upon the same or corresponding substances, the animal absorbing them from the exterior in a state in which they are almost fitted to nourish its living substances, the plant taking them in such a condition that an enormous amount of preliminary constructive work has to be expended upon them before they are of nutritive value, this constructive work being the formation from the simple bodies absorbed—of materials such as the animal absorbs directly as its food. The difference between them thus becomes at the outset one of considerable interest. It is not that the protoplasm of the animal needs different food from that of the vegetable; it is rather that while in both cases chemical work has to be performed upon the absorbed material before it can be regarded as food in the strict sense, that work in the case of an animal is on the whole a breaking down of complex bodies, but in that of a vegetable it is a building up of simpler ones till the same stage is reached in both cases, namely, a material which protoplasm or living substance can absorb into itself, and from which it can be constructed.

But so far as the vegetable organism is concerned, this is not by any means the whole story. Leaving aside for the moment the cases of such plants as fungi, which can do nothing with the food supply yielded to a normal green plant by the atmosphere, we find that the conditions of life of an ordinary green plant involve a great extension of the original constructive process. It has no definite and regular meal times at which it can take in a certain quantity of food regulated partly by the needs of the organism, and partly by the mysterious factor which we call appetite. Its absorptive processes are much more under the influence of natural phenomena, the degree of light, the amount of warmth, moisture, &c. Periods of intermission of irregular length are caused by the alternation of day and night; in the case of perennial plants still greater disturbances are caused by the succession of the seasons of the year, and the alterations these produce in the amount of foliage which the plant preserves; weather and its vicissitudes form a series of disturbing influences. We have thus the certainty of failure to survive in the struggle for existence unless the initial absorptive and constructive process are supplemented by others which in some way shall make the organism indifferent to these changes and intermissions of supply, and capable of carrying out true nutritive work, though the initial stages of such work are checked or suspended. Such a secondary process involves the whole story of what it is usual to call *reserve materials.* It is evident to as all, from a very general consideration of the peculiarities of the vegetable kingdom, that the constructive process is very much the leading one in the history of most of its members. Growth proceeds for such long periods, that there is stored up in such a structure as a forest tree for example, an enormous amount of material and of potential energy. This gross accumulation, however, of which as food supply the organism makes no use, must be distinguished from the storage of material intended for, and ultimately applied to, direct consumption by the plant in the processes of nutrition. It is the latter which constitutes the material truly and properly called *reserve.*

LIME IN AGRICULTURE.

There is perhaps no subject that is more often written about in agricultural publications than the value of lime in agriculture, and yet the im-

portance of "liming"—as the application of lime is generally called - is seldom fully recognised by agriculturists. If the reproach can be laid to the charge of Western agriculture, with much great force can this be done in the case of Eastern agriculture where the benefits of liming are but dimly recognised and the practice seldom adopted. The *Scottish Farmer*, taking as its text "Use more lime," summarizes the advantages of liming for the benefit of its readers, and we are inclined to think we cannot do better than follow our contemporary's example.

Lime is valuable as a direct plant food. Wherever soils are deficient in it, the application of even a limited quantity exerts a decided effect on vegetation. Its influence in hastening the decay of organic matter in the soil is of great value where that constituent is plentiful. Similarly, its action in liberating inorganic plant food, and making it readily available, is one of the most valuable benefits which it confers. Its indirect advantages in these ways are strong recommendations in its favour. The improvement which it brings about in the mechanical condition of the soil—especially heavy loams and stiff clays—ought not to be overlooked. But what we regard as one of its greatest advantages is apt to be either ignored altogether or made comparatively little of; we refer to its effect in sweetening soils and making them mellow by combining with or neutralising such injurious acids in the land as have made it sour. No other fertiliser exerts the same kind or degree of influence in this respect as lime. In fact, the extensive and repeated application of some classes of artificial manures has helped to generate these objectionable acids in the soil, and to that extent has checked its fertility. Such being the case, there is the greater reason why such an agent as lime should be used to neutralise these. Plain, practical men may be unable to understand the scientific side of this truth; but everyone who has observed at all closely the application of lime to land cannot but have noticed its practical operation, not only in its striking effect in stimulating luxuriant growth, but also in the more healthy character of the vegetation promoted by it. For a series of years after a judicious application of lime has been made to land it is apparent, even to the most superficial observer, that the plants at every stage of the rotation show a more healthy and vigorous life than on most land where that fertiliser has not been used. This is not simply that a more plentiful supply of plant food has indirectly, as well as directly, been made available, but that the general condition of the land has been improved by its being freed from sourness and other kindred objectionable elements which militate against the healthy growth of farm crops. To the value of lime in bringing about such results we attach much importance.

The *Agriculturist* of Florida for January 8th, also dilates upon lime "as a fertiliser and insecticide," and states that the purposes served by lime as a chemical constituent of the soil are at least of four distinct kinds:—

"1. It supplies a kind of inorganic food which appears to be necessary to the healthy growth of all cultivated plants.

"2. It neutralizes acid substances which are naturally formed in the soil, and decomposes or renders harmless other noxious compounds which are not infrequently within reach of the roots of plants.

"3. It changes the inert vegetable matter in the soil, so as gradually to render it useful to vegetation.

"4. It causes, facilitates, or enables other useful compounds, both organic and inorganic, to be produced in the soil—or so promotes the decomposition of existing compounds as to prepare them more speedily for entering into the circulation of plants."

From these deductions it is plainly apparent that liming lands is requisite to greater success in cropping, whether newly cleared, fallow, or fields in actual cultivation. If no other result than the destruction of worms and insects in the soil were obtained, it would be a paying investment for truck gardeners alone.

This paper recommends that on high sandy soil 30 to 50 bushels of freshly—slaked lime is considered sufficient, but on such lands as are rich in vegetable matter, it must be still more abundantly applied-from two to three hundred bushels per acre: its application producing the best results when sown broadcast over the surface after the land has been worked up.

THE MANAGEMENT OF DAIRY CATTLE.

By Mr. James Mollison,

Superintendent of Farms, Bombay Presidency.

(*Continued from last issue.*)

If reared by hand, Indian calves, which are generally small, can be kept in fairly thriving condition on 4 lbs. of whole milk per day, given at two meals. This, if continued, for 4 or 6 weeks, will bring the calf to a time when it can be fed on other food. The whole milk can be replaced by separated milk, but every cow-owner cannot procure separated milk, and on account of the heat in India there is no such thing as sweet skim-milk. The young calf will soon learn to eat a little *chuni* (husk of *Cajanus indicus* or *dhal*) and bran, also a little good hay or green grass.

A handful of mixed *chuni* and bran (about ½ lb. per day) in two meals is all that is required at first. The quantity may gradually be increased until, when 8 months old, 1½ lbs. per day should be allowed. On the ordinary milk ration of Indian calves, large framed English calves would literally starve. When a calf is raised by hand it has to be taught to drink. Its instinct is to suckle and this is taken advantage of in giving the first lesson. If sufficient time after birth is allowed, the calf gets hungry. It will suck one or two fingers of the right hand if introduced into its mouth. If at the same time the head is forced gently into a vessel containing the milk so that the muzzle just reaches the milk, the calf will soon learn to drink. The first milk is drawn into the mouth unconsciously and swallowed in the act of sucking the fingers. The important points to be attended to in rearing hand-fed calves are that the milk and food should be clean and fresh and of course given in a clean vessel. Sour milk or milk tainted in any way is apt to produce diarrhœa or scour. Well-ventilated and well-drained accommodation for calves is necessary. All excreta should be removed at least twice a day. The droppings from calves, fed on milk, soon acquire

a most disagreeable smell. Any unsanitary condition tends to cause scour. Over-crowded calves never thrive. They are subject to be attacked by parasitic vermin and skin disease, especially ringworm and itch. A piece of rock-salt should be placed so that the calves can lick it. If a hole is bored in the lump and the lump is suspended by a string, none of the salt is wasted. A lump of lime or chalk placed within reach will also be regularly licked. The chalk is beneficial, because it has a tendency to counteract that acidity in the stomach which always accompanies scour.

If proper attention is given to the feeding and management of calves during the first few months of their life, and if satisfactory progress has been made in growth during that period, they will continue to thrive often with much less care and with much less food than a young animal which has previously been half starved, and this remark is applicable to all animals. If young stock are to make satisfactory progress, even in India, a certain amount of shelter is necessary. The monsoon is decidedly the most trying season. Roomy yards with shelter steading must be provided to be used during excessively heavy rain. Grazing ground gets so soft and so easily puddled that any attempt to turn young stock out to graze would be alike harmful to them and to the pasture. In India the conditions associated with the rearing of young stock are different from those found in other countries. There is in India grazing of a sort all the year round. The grazing is not equally good at all seasons. Usually there is only green grass for 5 or 6 months, and the natural food must afterwards be supplemented by other food. The daily ration must be especially liberal at those seasons when the natural food is scarce.

Superabundance at one season and semi-starvation at another is a fruitful cause of loss. Particular care should be exercised when young grass begins to grow. It flushes up very suddenly in India. The first growth, although it is green, is not nutritious, and, being succulent, is not well suited as a change from the hard dry fibrous fodder previously given. Most of the cattle which die in India die at this season.

The change of feeding is so sudden that impaction of the stomach is induced. The innutritious fibrous food previously given collects in the ruemen and becomes impacted, whilst the green food passes through the alimentary canal without being properly digested. The first symptom is that the animal scours. Young stock should be prepared before they are turned out to grass. Linseed meal is a useful food at this season on account of its laxative character and its softening effect on food with which it becomes mixed during the process of digestion; but linseed cake is not usually procurable in India. A cake rich in oil and free from fibrous matter, for instance sesamum cake, should be fed to all young stock for at least a fortnight before they are turned out to grass; 2 or 3 lbs. per day along with the usual ration of dry fodder will prevent the serious consequences which would follow a sudden change from dry fodder to green grass.

Indian cows and buffaloes are at the best irregular breeders. Some breeds are more irregular than others. Gir cows are very unsatisfactory in this respect. On the other hand, Aden cattle, if well fed, will come in season for the bull six weeks or two months after calving. Buffaloes are less regular than cows. Green food given in moderation all the year round tends to bring cows and buffaloes sooner into "season" after calving. This would be the care even although the animals are otherwise well fed. A bull turned out to pasture with the cows periodically, say once a week, and especially a buffaloe bull with buffaloe cows tends to bring them into season sooner than would otherwise be the case. The following table of figures shows the average period of lactation and the average time between two successive births of the cow herd and buffaloe herd on the Poona Farm in 1893:—

	Av. period of lactation.	Av. period between two successive births.
	Days.	Days.
Whole buffaloe herd	364	524
Whole cow herd	360	475

The longer period betwe n births in respect of buffaloes arises partly because buffaloes are longer pregnant than cows.

Buffaloes are in the average pregnant	315	days
Cows ,,	282	,,

An old cow will carry a calf 10 days or a fortnight longer than a heifer, and a cow bearing twins will usually go 272 to 275 days.

THE DISPOSAL OF NIGHT-SOIL.

In his last annual report the Superintendent of the Poona Farm gives an account of an experiment, undertaken on behalf of the Cantonment Committee, in the direct application of night-soil to cultivated land. The method of application is described as the shallow-bed system. We quote as follows from the report:—"Beds are formed along one side of the area to be treated. The beds must be sufficient in number and extent to receive the night-soil of the following day or night. The beds are best made moderately small, one for each cart-load of night-soil. The soil inside the bed should be dug up and loosened, so that the liquid part of the night-soil soaks at once into the soil. If the beds are small, the semi-liquid night-soil as it escapes from the carts distributes itself equally. It should be covered immediataly with three inches of soil, the soil being obtained by digging out the beds necessary for the reception of the night-soil of the following day. When sufficient soil is removed to cover the night-soil properly, the bottom of each bed should be dug up to loosen the soil. If the beds are properly prepared, there is a guarantee that the night-soil is also sufficiently covered, consequently close supervision is not necessary. One inspection each day to see that the beds for next day's night-soil are properly prepared is all that is necessary.

The Poona night-soil carts have each a capacity of 200 gallons; probably on an average each cart contained about 120 gallons, or, say 1,400 lb. Approximately 200 cart-loads were applied per acre, and it is said that this was equivalent to 100 tons and probably 120 tons of mixed solid and liquid human excrements. The night-soil was applied between the 23rd June and the 9th July. There was hardly any noticeable small when the night-soil was covered with the necessary quantity of soil, and in a day or two there was nothing offensive or insanitary. The night-soil layer (when brought to view) could be distinguished by its

characteristic slate colour, the colour of poudrette. There was absolutely no taint or odour on its exposure at the surface. It had been buried three or four weeks."

And yet Mr. Mollison believes that the manufacture of poudrette will continue, because cultivators will prefer to use this form of night-soil, which has nothing objectionable about it and is easy of transport, and also because manufacturers of the manure can count on a profitable business in it.

The *Indian Agriculturist* mentions that the last quarterly report of Surgeon-Lieutenant-Colonel King, Sanitary Commissioner of Madras, contains some correspondence which he has had with the Coconada Municipality on the subject of sewage farming, about which his advice was sought. It seems that the Municipality in question intended to confine its operations to the manufacture of poudrette; but Surgeon-Lieutenant-Colonel King points out how easy it is to combine this with ordinary fluid sewage irrigation, such as is carried on successfully by the Madras Municipality. He explains the simple means by which this can be effected, giving all the necessary details as regards the best and cheapest plant and the easiest system of cultivation. He remarks that hurriall grass is perhaps the most satisfactory crop to grow under sewage. The only care requisite is that sewage irrigation should be checked as the crop becomes ready for cutting for from five to ten days previously. As regards the poudrette system, the main feature to remember, the Sanitary Commissioner says, is that the trenches should be shallow. What degree of shallowness is used must depend upon the area of land at disposal. At no time should the trenches be deeper than 18 inches, the depth up to which microbic life is most active. No rule, he says, can be laid down as to when the manure is fit for use; this can only be ascertained by direct observation, as the results vary much in different soils. Some period within six months may be taken as a safe calculation. But by occasionally opening a trench the state of progress can always be easily gauged. What is required is that before removal the trench contents shall in no way be distinguishable from the surrounding soil, unless it be by the rich dark colour and a tendency to the character of garden mould. As regards the nature of the soil best fitted for the securing of the change required, the nearer the soil approaches the character of garden mould, the better, and from this one may, in descending order of choice, select gravel, sand, or clay. The latter soil, however, unless well mixed with sand, vegetable matter, or ashes, cannot be expected to enable the necessary nitrification to proceed. Having prepared the soil, the question simply resolves itself into one of careful husbandry—the only care requisite being to guard against the tendency to overload the plants with manure.

Dr. Leather in his note on night-soil refers to the methods of preparing poudrette in certain Indian towns.

The practice at Nagpore, in the Central Provinces, is to fill night-soil and town-sweepings into pits measuring 10 feet by 4 feet and 4 feet deep into which about 100 cubic feet of sewage is emptied in 10 or 12 portions, 3 or 4 inches of earth being thrown over each layer.

At Poona a similar practice prevails, the pits there being 18 feet by 15 feet and only 1 foot deep. Ashes are spread over the night-soil.

A similar system prevails at Cawnpur.

After a time the material becomes dry and nearly odourless and is taken out of the pits and sold for manure.

Regarding the chemical composition of such poudrette, it will be evident that this will depend on the proportion of earth which is mixed with the refuse, and secondly, on the comparative dryness or wetness of the material when taken out of the pits. The larger the proportion of earth and the wetter the condition of the poudrette, the smaller will be the percentage of plant-food ingredients, such as phosphoric acid and nitrogen.

The following analyses of samples of poudrette which have been made by Dr. Leather, himself, may be quoted:—

	Poudrette form Cawnpur.	*Poudrette from Poona.*
Moisture ..	2·64	22·91
Organic matter ..	7·82	18·10
Earthly substance	89·54	58·99
	100·00	100·00
Containing		
Nitrogen	0·468	0·906
Phosphoric Acid	0·499	

NOTES ON THE TOMATO.

This having of late become one of our most common and valuable fruits, it may interest our readers to know that the *American Agriculturist* reports a series of experiments made as to the chemical composition of both the fruit and the vine. These show that the crop requires almost twice as much potash as any other ingredient; and also that because nitrogen, the most expensive element of plant-food, can only have its full effect when available potash and phosphates are present in excess in the soil. Any excess of potash over the requirements of the crop will not waste from the soil by drainage, but will be retained in combination by the soil for use in future crops.

The experiments show that when potash is deficient in the soil, the growing plant, of whatever description it may be, becomes much more sensitive to adverse conditions of soil or season, and is more readily attacked by disease, especially mildew and other fungoid growths.

Wood ashes contain a large percentage of potash, and will be found an excellent manure for tomatoes. Not only do they correct any acidity in the soil, but they favour nitrification, and they supply carbonate of lime, of which a tomato crop requires at least 50 lb. to the acre. A small amount of available phosphate will in most cases be sufficient for a successful tomato crop. Having made sure of an excess of lime, phosphates, and potash salts in the soil, nitrogen should be used freely but economically; a small quantity given frequently is much better than a large dose supplied all at once.

Applications of soluble forms of nitrogen, and particularly of nitrates, seem to increase the yield

of fruit without retarding maturation, and even to hasten the latter, provided there is sufficient heat at command.

The usual distance apart tomatoes are planted is 4 ft. Upon this basis, an acre will contain about 2,700 vines, weighing after the last picking about 8,700 lb. The roots will weigh about 1,350 lb. Taking 10 tons as an average yield, a tomato crop will take from the soil in pounds per acre:—Nitrogen—In fruit 28 lb., in vines 28 lb., in roots 3 lb.; total, 59 lb. Phosphoric acid—In fruit 11 lb., in vines 6 lb., in roots 1 lb., total, 18 lb. Potash—In fruit 53 lb., in vine 44 lb., in roots 4 lb.; total 101 lb.

Dr. Jenkins, of the Connecticut Experiment Farm, reckons that one-half of what is taken up by the plants from the soil is returned to it again in the vines and roots, that is, presuming these are returned to the land as manure.

In some parts of the United States of America, the tomato crop is an important one, and with skilful cultivation 15 tons to the acre are often secured. The Canary Islands export to England about 150,000 cases, or something like 2,700 tons of tomatoes per annum. They are grown, packed, shipped, and delivered in London at a cost of 2d. per lb. The seed they import from England, and this is distributed among them on their undertaking to sell their produce at so much per cwt.

GENERAL ITEMS.

A cursory glance at the Report on the Aboricultural operations, N.W. Provinces and Oude, for the year ending 31st March, 1895, reveals the fact that the authorities concerned have been very active in the matter of roadside aboriculture. We are told in the report that the actual length of avenues at the beginning of 1894-95 was 8,251 miles; that 234 miles of new avenues were planted during the year; and that the total length of avenues on the 31st of March, 1895, was therefore 8,485 miles. Roadside aboriculture in the neighbourhood of Colombo would seem to have almost died out with the late Mr. William Ferguson, with whom the work of tree-planting—for ornament and utility—was indeed a labour of love. Such tree-planting as is at present done is carried out in a perfunctory manner with little display of taste, and the result is that while many public thoroughfares provide no shelter from the burning rays of a tropical sun, the rest present wretched specimens of vegetation, left to struggle on as best they can.

Meehan's Monthly for December makes the interesting statement that the Tangerine orange, and possibly some other varieties, are formed through the effort of the orange to make a secondary fruit at the apex of the original one, only that it failed to make any original at all. In other words, the Tangerine orange is a well-developed secondary fruit. How this can be brought about may be readily understood by carefully examining the oranges known in the markets as the Navel variety. In these cases, a small orange can often be found at the apex, sometimes of considerable size. When this small one is largely developed, and the larger one wholly suppressed, then we have the Tangerine.

A writer (W. B. Hall) on "lemon culture" gives the following hints, which we take over from the *Rural Californian*:—"The distance trees should be planted apart depends somewhat upon the soil and their future management or training. I believe 25 feet to be generally about right. Head the tree about two and a half feet from the ground, keep it shortened in for three or four years, forcing a thick stocky basis for after growth. The tree by this time is bearing freely, and the fruit will pull or bend down the long shoots, which will then put up or throw out small fruit-bearing timber along the upper side of the drooping limb. I think this preferable to a continuous shortening of all long growth. A dense shady tree is what is wanted, since the denser the shade the more symmetrical and smooth the fruit will be. Limbs that reach to and lie upon the ground may from time to time (as needed) be tipped off."

The treatment of the lemon tree in Sicily is again very different from the method above described. In the report of the British Consul at Parlermo (published in the *Kew Bulletin* for October 1895) we read with regard to lemons:—"Tree should be trained high to admit free ventilation, pruning to take place regularly once a year. The clearing away of dried twigs and suckers precedes the pruning and sometimes renders the latter unnecessary.

An exceptional crop of onions is said by an American paper to have been raised by the following method. A patch three rods long and two wide was selected. The ground was prepared in the usual way, well fertilized and raked smooth. Then foot boards 12 feet long were placed so as to leave an opening about 4 inches between them. Along this opening onion sets were planted about six inches apart. The boards were not removed during the growing of the crop, and acted as a mulch through which weeds could not penetrate. A very little labour kept the weeds out of the rows, and the crop matured in fine shape, giving an extraordinary large yield. It took sixty-six boards to cover the patch, and they cost the grower about $5. The boards will last many seasons for this purpose, if taken up during the winter, and the cheapest kind of lumber will answer the purpose. The enforced idleness to the land conveyed by the boards adds greatly to the productiveness, claims the grower of the crop. Six-inch boards would answer the purpose fully as well, and then nearly twice the quantity could be grown upon the same amount of land.

The Madras Government lately appointed a Committee to report on several water-lifts for agricultural purposes that are now in the market. The Committee found some good points in these lifts, but suggest that a reward of R1,000 be offered for a really efficient lift suitable to the needs of the average ryot. As the matter is of imperial interest, the Government of India are to be asked to consider whether it would not be possible to promote a competition throughout the country by the offer of substantial prizes.

No absolute specific has yet been discovered for the various diseases to which the tomato plant is subject; but correspondents of the *Journal of Horticulture* recommend that the plants when

badly affected should be rooted up and burnt, and that the same soil should not be again used for tomato culture. If avoidable, organic manures should not be used. Charcoal is said to be good for keeping the soil sweet, and lime assists in preventing the drooping disease as caused by either slime or sleepy fungus. "Fostite," a French preparation of talc and salts of copper, has proved effectual as a remedy for fungoid disease incidental to the tomato. Green copperas applied to the land while fallow is also recommended.

F. Alberts, proprietor of Moulton Hill vineyard two miles south of Cloverdale, has for many years been experimenting on a process for the manufacture of a syrup from grape juice, and has at last succeeded in producing the article desired. Last season he manufactured nearly 25,000 gallons of this syrup. Its uses are manifold. It is excellent for sweetening wine and whisky, thus taking the place of cane syrup, which is not so desirable for that purpose. The syrup is also used as a substitute for honey and cane syrup. This invention will be beneficial to the wine trade as it yearly withdraws grapes equivalent to 250,000 gallons of wine.—*San Rosa Republican.*

It is reported that most of the Florida orange groves have been destroyed by frost. The orange industry in Florida was of the annual value of nearly a million sterling. This failure has led growers to think of starting cultivation in Jamaica and the Bahamas. It is said that during 1895 only 100,000 boxes of oranges were shipped from Florida instead of 5,000,000 boxes!

We have to acknowledge with thanks the receipt of copies of *The Sugar Journal*, *The Barbados Agricultural Gazette*, *The Central African Planter*, *The Agricultural Gazette of Cape Colony*; and of local publications, *The Ceylon Forester*, *Our Boys*, *The St. Thomas' College Magazine*, *The Ceylon Commercial News.*